	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
9	BRS	L75	3	(cmp or "chemical mechanical polishing") and ("pentadione dioxime" or pentadione)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/02 15:28			0
10	BRS	L82	3	(cmp or "chemical mechanical polishing" or planariz$3 or planarization) and ("pentadione dioxime" or pentadione)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/02 17:22			0
11	BRS	L89	15	(cmp or "chemical mechanical polishing" or planariz$3 or planarization or polish$3) and ("pentadione dioxime" or pentadione)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/02 17:03			0
12	BRS	L119	0	(cmp or "chemical mechanical polishing") and "milled aluminum"	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/02 17:20			0
13	BRS	L126	2	(cmp or "chemical mechanical polishing" or planariz$3 or planarization) and ("milled aluminum")	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/02 17:23			0
14	BRS	L133	1	(abrasive or slurry or "metal oxide") with ("milled aluminum")	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/02 17:27			0
15	BRS	L140	3212	(abrasive or slurry or "metal oxide") with milled	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/02 17:31			0
16	BRS	L147	26	(abrasive or slurry or "metal oxide") with ("milled alumina")	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/02 17:28			0

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
17	BRS	L154	5439	(abrasive or slurry or "metal oxide") same milled	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/02 17:31			0
18	BRS	L161	23	154 and 438/$.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/02 17:32			0

```
=> d his

     (FILE 'HOME' ENTERED AT 15:42:52 ON 02 APR 2003)

     FILE 'REGISTRY' ENTERED AT 15:43:12 ON 02 APR 2003
                E 2,4-PENTADIONE DIOXIME
L1           0 S E3
                E 2,4-PENTADIONE
L2           5 S E3
                E 2,4-PENTADIONE DIOXIME/CN
L3           0 S E3
                E 2,4-PENTADIONE/CN
L4           1 S E3
                E 2,4-PENTADIONE DIOXIME/CN
L5           0 S E3
                E 2,4 PENTADIONE DIOXIME/CN
L6           0 S E3

     FILE 'CAPLUS' ENTERED AT 15:52:39 ON 02 APR 2003
                S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND  123-54-6/REG#

     FILE 'REGISTRY' ENTERED AT 15:53:31 ON 02 APR 2003
L7           1 S 123-54-6/RN

     FILE 'CAPLUS' ENTERED AT 15:53:31 ON 02 APR 2003
L8       11819 S L7
L9           2 S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND L8

     FILE 'REGISTRY' ENTERED AT 16:05:22 ON 02 APR 2003
L10          0 S PENTADIONE/CNS AND DIOXIME/CNS
L11      22804 S ?DION?/CNS AND ?OXIME?/CNS

     FILE 'CAPLUS' ENTERED AT 16:06:14 ON 02 APR 2003
L12     179225 S CMP OR POLISH? OR CHEMIPOLISH? OR CHEMIMECH? OR PLANARIZ? OR
L13         28 S L11 AND L12
                S 95-45-4/REG#
-------------------------------------------------------------------------------

     FILE 'REGISTRY' ENTERED AT 16:09:23 ON 02 APR 2003
L14          1 S 95-45-4/RN

     FILE 'CAPLUS' ENTERED AT 16:09:23 ON 02 APR 2003
L15       1328 S L14

     FILE 'REGISTRY' ENTERED AT 16:10:07 ON 02 APR 2003
L16        680 S ?HYDRAZINE?/CNS AND ?BENZOIC?/CNS

     FILE 'CAPLUS' ENTERED AT 16:10:31 ON 02 APR 2003
L17          4 S L16 AND L12

     FILE 'REGISTRY' ENTERED AT 16:13:08 ON 02 APR 2003
L18          0 S ?PENTADIONE?/CNS AND ?DIOXIME?/CNS
L19        486 S ?PENTANEDIONE?/CNS AND ?DIOXIME?/CNS

     FILE 'CAPLUS' ENTERED AT 16:14:06 ON 02 APR 2003
L20          2 S L19 AND L12
L21          1 S L17 AND L20

     FILE 'USPATFULL' ENTERED AT 16:18:01 ON 02 APR 2003
L22         92 S L12 AND L16
L23          2 S L12 AND L19
L24          1 S L22 AND L23
L25         91 S L22 NOT L24
```

```
L26            0 S L25 AND (CMP OR POLISH? OR CHEMIPOLISH? OR CHEMIMECH? OR PLAN
                 SET HIGH OFF
L27           15 S L25 AND (SEMICONDUCT? OR WAFER? OR CHIP#)
                 SET HIGH ON
L28           15 S L25 AND L27
L29           76 S L25 NOT L28

=>
```

```
=> d his

     (FILE 'HOME' ENTERED AT 15:42:52 ON 02 APR 2003)

     FILE 'REGISTRY' ENTERED AT 15:43:12 ON 02 APR 2003
                E 2,4-PENTADIONE DIOXIME
L1              0 S E3
                E 2,4-PENTADIONE
L2              5 S E3
                E 2,4-PENTADIONE DIOXIME/CN
L3              0 S E3
                E 2,4-PENTADIONE/CN
L4              1 S E3
                E 2,4-PENTADIONE DIOXIME/CN
L5              0 S E3
                E 2,4 PENTADIONE DIOXIME/CN
L6              0 S E3

     FILE 'CAPLUS' ENTERED AT 15:52:39 ON 02 APR 2003
                S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND  123-54-6/REG#

     FILE 'REGISTRY' ENTERED AT 15:53:31 ON 02 APR 2003
L7              1 S 123-54-6/RN

     FILE 'CAPLUS' ENTERED AT 15:53:31 ON 02 APR 2003
L8          11819 S L7
L9              2 S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND L8

     FILE 'REGISTRY' ENTERED AT 16:05:22 ON 02 APR 2003
L10             0 S PENTADIONE/CNS AND DIOXIME/CNS
L11         22804 S ?DION?/CNS AND ?OXIME?/CNS

     FILE 'CAPLUS' ENTERED AT 16:06:14 ON 02 APR 2003
L12        179225 S CMP OR POLISH? OR CHEMIPOLISH? OR CHEMIMECH? OR PLANARIZ? OR
L13            28 S L11 AND L12
                S 95-45-4/REG#

     FILE 'REGISTRY' ENTERED AT 16:09:23 ON 02 APR 2003
L14             1 S 95-45-4/RN

     FILE 'CAPLUS' ENTERED AT 16:09:23 ON 02 APR 2003
L15          1328 S L14

     FILE 'REGISTRY' ENTERED AT 16:10:07 ON 02 APR 2003
L16           680 S ?HYDRAZINE?/CNS AND ?BENZOIC?/CNS

     FILE 'CAPLUS' ENTERED AT 16:10:31 ON 02 APR 2003
L17             4 S L16 AND L12

     FILE 'REGISTRY' ENTERED AT 16:13:08 ON 02 APR 2003
L18             0 S ?PENTADIONE?/CNS AND ?DIOXIME?/CNS
L19           486 S ?PENTANEDIONE?/CNS AND ?DIOXIME?/CNS

     FILE 'CAPLUS' ENTERED AT 16:14:06 ON 02 APR 2003
L20             2 S L19 AND L12
L21             1 S L17 AND L20

     FILE 'USPATFULL' ENTERED AT 16:18:01 ON 02 APR 2003
L22            92 S L12 AND L16
L23             2 S L12 AND L19
L24             1 S L22 AND L23
L25            91 S L22 NOT L24
```

```
L26             0 S L25 AND (CMP OR POLISH? OR CHEMIPOLISH? OR CHEMIMECH? OR PLAN
                  SET HIGH OFF
L27            15 S L25 AND (SEMICONDUCT? OR WAFER? OR CHIP#)
                  SET HIGH ON
L28            15 S L25 AND L27
L29            76 S L25 NOT L28

=>
```

Connecting via Winsock to STN

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PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

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NEWS 1		Web Page URLs for STN Seminar Schedule - N. America
NEWS 2	Apr 08	"Ask CAS" for self-help around the clock
NEWS 3	Apr 09	BEILSTEIN: Reload and Implementation of a New Subject Area
NEWS 4	Apr 09	ZDB will be removed from STN
NEWS 5	Apr 19	US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
NEWS 6	Apr 22	Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
NEWS 7	Apr 22	BIOSIS Gene Names now available in TOXCENTER
NEWS 8	Apr 22	Federal Research in Progress (FEDRIP) now available
NEWS 9	Jun 03	New e-mail delivery for search results now available
NEWS 10	Jun 10	MEDLINE Reload
NEWS 11	Jun 10	PCTFULL has been reloaded
NEWS 12	Jul 02	FOREGE no longer contains STANDARDS file segment
NEWS 13	Jul 22	USAN to be reloaded July 28, 2002; saved answer sets no longer valid
NEWS 14	Jul 29	Enhanced polymer searching in REGISTRY
NEWS 15	Jul 30	NETFIRST to be removed from STN
NEWS 16	Aug 08	CANCERLIT reload
NEWS 17	Aug 08	PHARMAMarketLetter(PHARMAML) - new on STN
NEWS 18	Aug 08	NTIS has been reloaded and enhanced
NEWS 19	Aug 19	Aquatic Toxicity Information Retrieval (AQUIRE) now available on STN
NEWS 20	Aug 19	IFIPAT, IFICDB, and IFIUDB have been reloaded
NEWS 21	Aug 19	The MEDLINE file segment of TOXCENTER has been reloaded
NEWS 22	Aug 26	Sequence searching in REGISTRY enhanced
NEWS 23	Sep 03	JAPIO has been reloaded and enhanced
NEWS 24	Sep 16	Experimental properties added to the REGISTRY file
NEWS 25	Sep 16	CA Section Thesaurus available in CAPLUS and CA
NEWS 26	Oct 01	CASREACT Enriched with Reactions from 1907 to 1985
NEWS 27	Oct 21	EVENTLINE has been reloaded
NEWS 28	Oct 24	BEILSTEIN adds new search fields
NEWS 29	Oct 24	Nutraceuticals International (NUTRACEUT) now available on STN
NEWS 30	Oct 25	MEDLINE SDI run of October 8, 2002
NEWS 31	Nov 18	DKILIT has been renamed APOLLIT
NEWS 32	Nov 25	More calculated properties added to REGISTRY
NEWS 33	Dec 02	TIBKAT will be removed from STN
NEWS 34	Dec 04	CSA files on STN
NEWS 35	Dec 17	PCTFULL now covers WP/PCT Applications from 1978 to date
NEWS 36	Dec 17	TOXCENTER enhanced with additional content
NEWS 37	Dec 17	Adis Clinical Trials Insight now available on STN
NEWS 38	Dec 30	ISMEC no longer available
NEWS 39	Jan 21	NUTRACEUT offering one free connect hour in February 2003
NEWS 40	Jan 21	PHARMAML offering one free connect hour in February 2003
NEWS 41	Jan 29	Simultaneous left and right truncation added to COMPENDEX, ENERGY, INSPEC
NEWS 42	Feb 13	CANCERLIT is no longer being updated
NEWS 43	Feb 24	METADEX enhancements

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NEWS 44   Feb 24   PCTGEN now available on STN
NEWS 45   Feb 24   TEMA now available on STN
NEWS 46   Feb 26   NTIS now allows simultaneous left and right truncation
NEWS 47   Feb 26   PCTFULL now contains images
NEWS 48   Mar 04   SDI PACKAGE for monthly delivery of multifile SDI results
NEWS 49   Mar 19   APOLLIT offering free connect time in April 2003
NEWS 50   Mar 20   EVENTLINE will be removed from STN
NEWS 51   Mar 24   PATDPAFULL now available on STN
NEWS 52   Mar 24   Additional information for trade-named substances without
                   structures available in REGISTRY
NEWS 53   Mar 24   Indexing from 1957 to 1966 added to records in CA/CAPLUS

NEWS EXPRESS  January 6 CURRENT WINDOWS VERSION IS V6.01a,
              CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
              AND CURRENT DISCOVER FILE IS DATED 01 OCTOBER 2002
NEWS HOURS    STN Operating Hours Plus Help Desk Availability
NEWS INTER    General Internet Information
NEWS LOGIN    Welcome Banner and News Items
NEWS PHONE    Direct Dial and Telecommunication Network Access to STN
NEWS WWW      CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that
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  * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * *


FILE 'HOME' ENTERED AT 15:42:52 ON 02 APR 2003

=> FIL REGISTRY
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                                 0.21       0.21

FILE 'REGISTRY' ENTERED AT 15:43:12 ON 02 APR 2003
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Property values tagged with IC are from the ZIC/VINITI data file
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STRUCTURE FILE UPDATES:    1 APR 2003  HIGHEST RN 501325-53-7
DICTIONARY FILE UPDATES:   1 APR 2003  HIGHEST RN 501325-53-7

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available.  See HELP
PROPERTIES for more information.  See STNote 27, Searching Properties
```

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in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> e 2,4-pentadione dioxime
E1            6     2,4-D/BI
E2            1     2,4-G/BI
E3            0 --> 2,4-PENTADIONE DIOXIME/BI
E4            1     2,4.10/BI
E5            3     2,4.6/BI
E6            3     2,4.ALPHA./BI
E7            2     2,4.ALPHA.,5,6,7.ALPHA.,8,8/BI
E8            1     2,4.ALPHA.,6,8/BI
E9            1     2,4.ALPHA.,7.ALPHA./BI
E10           2     2,4.ALPHA..BETA./BI
E11          10     2,4.BETA./BI
E12           1     2,4.BETA.,4A.BETA.,5,6,7,7A.BETA.,7B/BI

=> s e3
        972302 "2,4"/BI
            13 "PENTADIONE"/BI
         15451 "DIOXIME"/BI
L1           0 "2,4-PENTADIONE DIOXIME"/BI
                 (("2,4"(W)"PENTADIONE"(W)"DIOXIME")/BI)

=> e 2,4-pentadione
E1            6     2,4-D/BI
E2            1     2,4-G/BI
E3            0 --> 2,4-PENTADIONE/BI
E4            1     2,4.10/BI
E5            3     2,4.6/BI
E6            3     2,4.ALPHA./BI
E7            2     2,4.ALPHA.,5,6,7.ALPHA.,8,8/BI
E8            1     2,4.ALPHA.,6,8/BI
E9            1     2,4.ALPHA.,7.ALPHA./BI
E10           2     2,4.ALPHA..BETA./BI
E11          10     2,4.BETA./BI
E12           1     2,4.BETA.,4A.BETA.,5,6,7,7A.BETA.,7B/BI

=> s e3
        972302 "2,4"/BI
            13 "PENTADIONE"/BI
L2           5 "2,4-PENTADIONE"/BI
                 (("2,4"(W)"PENTADIONE")/BI)

=> e 2,4-pentadione dioxime/cn
E1            1     2,4-PENTADIENYLPOTASSIUM/CN
E2            1     2,4-PENTADIONE/CN
E3            0 --> 2,4-PENTADIONE DIOXIME/CN
E4            1     2,4-PENTADIONE-BIS-(3-CARBOETHOXY PENTADIONE-(2,4) ALUMINUM/
                    CN
E5            1     2,4-PENTADITAN/CN
E6            1     2,4-PENTADIYN-1-(P-N,N-DIMETHYLAMINOAZOBENZENESULFONATE)-5-(
                    P-METHYLTHIO-O-METHYLPYRIMIDINE)/CN
E7            1     2,4-PENTADIYN-1-AMINE, 5,5'-(1,4-PHENYLENE)BIS(N,N-DIETHYL-,
                     HYDROCHLORIDE/CN
E8            1     2,4-PENTADIYN-1-AMINE, 5-((1,1-DIMETHYLETHYL)DIMETHYLSILYL)-
                    N,N-DIMETHYL-/CN
E9            1     2,4-PENTADIYN-1-AMINE, 5-(2,3-DIMETHYLOXIRANYL)-N,N-DIETHYL-
                    /CN
E10           1     2,4-PENTADIYN-1-AMINE, 5-(4-CHLOROPHENYL)-N,N-DIMETHYL-/CN
E11           1     2,4-PENTADIYN-1-AMINE, 5-(4-METHOXYPHENYL)-N,N-DIMETHYL-/CN
E12           1     2,4-PENTADIYN-1-AMINE, N,N-BIS(1-METHYLETHYL)-/CN
```
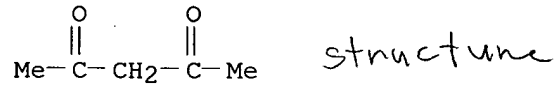
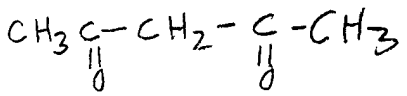

```
=> s e3
L3            0 "2,4-PENTADIONE DIOXIME"/CN

=> e 2,4-pentadione/cn
E1            1     2,4-PENTADIENYLOXY, 1,5-DIOXO-/CN
E2            1     2,4-PENTADIENYLPOTASSIUM/CN
E3            1 --> 2,4-PENTADIONE/CN
E4            1     2,4-PENTADIONE-BIS-(3-CARBOETHOXY PENTADIONE-(2,4) ALUMINUM/
                    CN
E5            1     2,4-PENTADITAN/CN
E6            1     2,4-PENTADIYN-1-(P-N,N-DIMETHYLAMINOAZOBENZENESULFONATE)-5-(
                    P-METHYLTHIO-O-METHYLPYRIMIDINE)/CN
E7            1     2,4-PENTADIYN-1-AMINE, 5,5'-(1,4-PHENYLENE)BIS(N,N-DIETHYL-,
                     HYDROCHLORIDE/CN
E8            1     2,4-PENTADIYN-1-AMINE, 5-((1,1-DIMETHYLETHYL)DIMETHYLSILYL)-
                    N,N-DIMETHYL-/CN
E9            1     2,4-PENTADIYN-1-AMINE, 5-(2,3-DIMETHYLOXIRANYL)-N,N-DIETHYL-
                    /CN
E10           1     2,4-PENTADIYN-1-AMINE, 5-(4-CHLOROPHENYL)-N,N-DIMETHYL-/CN
E11           1     2,4-PENTADIYN-1-AMINE, 5-(4-METHOXYPHENYL)-N,N-DIMETHYL-/CN
E12           1     2,4-PENTADIYN-1-AMINE, N,N-BIS(1-METHYLETHYL)-/CN

=> s e3
L4            1 "2,4-PENTADIONE"/CN

=> d l4

L4   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2003 ACS
RN   123-54-6  REGISTRY
CN   2,4-Pentanedione (8CI, 9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   2,4-Dioxopentane
CN   2,4-Pentadione
CN   2-Propanone, acetyl-
CN   ACAC
CN   Acetoacetone
CN   Acetylacetone
CN   Diacetylmethane
CN   Pentan-2,4-dione
FS   3D CONCORD
DR   81235-32-7
MF   C5 H8 O2
CI   COM
LC   STN Files:   AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS,
       BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN,
       CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DETHERM*,
       DIPPR*, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*,
       HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS,
       NIOSHTIC, PDLCOM*, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER,
       TULSA, USPAT2, USPATFULL, VTB
         (*File contains numerically searchable property data)
     Other Sources:   DSL**, EINECS**, TSCA**
         (**Enter CHEMLIST File for up-to-date regulatory information)
```



structure



```
**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

      11799 REFERENCES IN FILE CA (1962 TO DATE)
       1028 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
      11822 REFERENCES IN FILE CAPLUS (1962 TO DATE)
         17 REFERENCES IN FILE CAOLD (PRIOR TO 1967)


=> e 2,4-pentadione dioxime/cn
E1            1     2,4-PENTADIENYLPOTASSIUM/CN
E2            1     2,4-PENTADIONE/CN
E3            0 --> 2,4-PENTADIONE DIOXIME/CN
E4            1     2,4-PENTADIONE-BIS-(3-CARBOETHOXY PENTADIONE-(2,4) ALUMINUM/
                    CN
E5            1     2,4-PENTADITAN/CN
E6            1     2,4-PENTADIYN-1-(P-N,N-DIMETHYLAMINOAZOBENZENESULFONATE)-5-(
                    P-METHYLTHIO-O-METHYLPYRIMIDINE)/CN
E7            1     2,4-PENTADIYN-1-AMINE, 5,5'-(1,4-PHENYLENE)BIS(N,N-DIETHYL-,
                     HYDROCHLORIDE/CN
E8            1     2,4-PENTADIYN-1-AMINE, 5-((1,1-DIMETHYLETHYL)DIMETHYLSILYL)-
                    N,N-DIMETHYL-/CN
E9            1     2,4-PENTADIYN-1-AMINE, 5-(2,3-DIMETHYLOXIRANYL)-N,N-DIETHYL-
                    /CN
E10           1     2,4-PENTADIYN-1-AMINE, 5-(4-CHLOROPHENYL)-N,N-DIMETHYL-/CN
E11           1     2,4-PENTADIYN-1-AMINE, 5-(4-METHOXYPHENYL)-N,N-DIMETHYL-/CN
E12           1     2,4-PENTADIYN-1-AMINE, N,N-BIS(1-METHYLETHYL)-/CN

=> s e3
L5            0 "2,4-PENTADIONE DIOXIME"/CN

=> d l5
L5 HAS NO ANSWERS
L5             0 SEA FILE=REGISTRY "2,4-PENTADIONE DIOXIME"/CN


=> e 2,4 PENTADIONE DIOXIME/CN
E1            1     2,4-DIMETHYLTETRAHYDROTHIOPHENE/CN
E2            1     2,4 LUTIDINE, COMPD. WITH 3,5-DINITRO-2-PYRIDINOL/CN
E3            0 --> 2,4 PENTADIONE DIOXIME/CN
E4            1     2,4'''-BIACETOPHENONE, 2''-PHENYL-/CN
E5            1     2,4'''-BIACETOPHENONE, 3''',4'-DIMETHOXY-/CN
E6            1     2,4'''-BIACETOPHENONE, 3'''-HYDROXY-/CN
E7            1     2,4'''-BIACETOPHENONE, 3'''-HYDROXY-4'-METHOXY-/CN
E8            1     2,4'''-BIACETOPHENONE, 3'''-METHOXY-/CN
E9            1     2,4'''-BIACETOPHENONE, 4'-METHOXY-2''-(P-PHENYLACETYLPHENYL)
                    -/CN
E10           1     2,4'''-BIACETOPHENONE, 4'-METHOXY-2''-PHENYL-/CN
E11           1     2,4'''-BIACETOPHENONE, 4'-METHYL-2''-(P-PHENYLACETYLPHENYL)-
                    /CN
E12           1     2,4'''-BIACETOPHENONE, 4'-METHYL-2''-PHENYL-/CN

=> s e3
L6            0 "2,4 PENTADIONE DIOXIME"/CN

=> d l6
L6 HAS NO ANSWERS
L6             0 SEA FILE=REGISTRY "2,4 PENTADIONE DIOXIME"/CN


=> FIL CAPLUS
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                 ENTRY    SESSION
```

FULL ESTIMATED COST 46.06 46.27

FILE 'CAPLUS' ENTERED AT 15:52:39 ON 02 APR 2003
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FILE COVERS 1907 - 2 Apr 2003 VOL 138 ISS 14
FILE LAST UPDATED: 1 Apr 2003 (20030401/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> (cmp or "chemical mechanical polishing") and 123-54-6
REG1stRY INITIATED
Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

L8 11819 L7

7829 CMP
797053 "CHEMICAL"
219970 "MECHANICAL"
39601 "POLISHING"
1317 "CHEMICAL MECHANICAL POLISHING"
("CHEMICAL"(W)"MECHANICAL"(W)"POLISHING")
L9 2 (CMP OR "CHEMICAL MECHANICAL POLISHING") AND L8

=> d 19

L9 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS
AN 2003:40516 CAPLUS
DN 138:116223
TI **Chemical mechanical polishing** agent containing cerium oxide grain and method of polishing semiconductor chip substrate using the same
IN Sakurada, Takeshi
PA Hitachi Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003017445	A2	20030117	JP 2001-197275	20010628
PRAI	JP 2001-197275		20010628		
OS	MARPAT 138:116223				

date is not good

=> d all

L9 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS
AN 2003:40516 CAPLUS
DN 138:116223
TI **Chemical mechanical polishing** agent containing cerium oxide grain and method of polishing semiconductor chip substrate using the same
IN Sakurada, Takeshi
PA Hitachi Chemical Co., Ltd., Japan
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CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM H01L021-304
ICS B24B037-00; C09K003-14
CC 76-3 (Electric Phenomena)
Section cross-reference(s): 46
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003017445	A2	20030117	JP 2001-197275	20010628
PRAI	JP 2001-197275		20010628		
OS	MARPAT 138:116223				

date

AB The **CMP** agent comprises a Ce oxide grain, a water-sol. polymer, a complex-forming agent, and water, in which a concn. of the complex-forming agent is set at 0.1-10.0 %. The complex-forming agent is .beta.-diketone represented by R1C(:O)CHR3C(:O)R2 (E1,2 = alkyl; and R3 = H, C1-3 alkyl) or acetylacetone. The water-sol. polymer may be selected from water-sol. anionic surfactants and water-sol. nonionic surfactants. The **CMP** agent is used to polish a semiconductor chip substrate having a silicon oxide insulating film. The **CMP** agent exhibited an improved rinsing performance.

ST chem mech polishing silicon oxide insulating film semiconductor substrate; diketone acetylacetone complex forming agent; surfactant water sol polymer

IT Ketones, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(1,3-diketones, complexing agent; **CMP** agent contg. Ce oxide grain for polishing semiconductor chip)

IT Complexing agents
Polishing
Polishing materials
Semiconductor materials
(**CMP** agent contg. Ce oxide grain for polishing semiconductor chip)

IT Surfactants
(anionic; **CMP** agent contg. Ce oxide grain for polishing semiconductor chip)

IT Surfactants
(nonionic; **CMP** agent contg. Ce oxide grain for polishing semiconductor chip)

IT 7631-86-9, Silicon oxide, processes
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(**CMP** agent contg. Ce oxide grain for polishing semiconductor chip)

IT 1306-38-3, Cerium oxide, uses 7732-18-5, Water, uses 9003-03-6, Polyacrylic acid ammonium salt
RL: TEM (Technical or engineered material use); USES (Uses)
(**CMP** agent contg. Ce oxide grain for polishing semiconductor chip)

IT **123-54-6**, Acetylacetone, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(complexing agent; **CMP** agent contg. Ce oxide grain for polishing semiconductor chip)

=> d 19, 1,2, all
2 ANSWERS ARE AVAILABLE. SPECIFIED ANSWER NUMBER EXCEEDS ANSWER SET SIZE
The answer numbers requested are not in the answer set.
ENTER ANSWER NUMBER OR RANGE (1):1-2

L9 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS
AN 2003:40516 CAPLUS
DN 138:116223
TI **Chemical mechanical polishing** agent containing cerium oxide grain and method of polishing semiconductor chip substrate using the same
IN Sakurada, Takeshi
PA Hitachi Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM H01L021-304
ICS B24B037-00; C09K003-14
CC 76-3 (Electric Phenomena)
Section cross-reference(s): 46
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003017445	A2	20030117	JP 2001-197275	20010628
PRAI	JP 2001-197275		20010628		

OS MARPAT 138:116223
AB The **CMP** agent comprises a Ce oxide grain, a water-sol. polymer, a complex-forming agent, and water, in which a concn. of the complex-forming agent is set at 0.1-10.0 %. The complex-forming agent is .beta.-diketone represented by R1C(:O)CHR3C(:O)R2 (E1,2 = alkyl; and R3 = H, C1-3 alkyl) or acetylacetone. The water-sol. polymer may be selected from water-sol. anionic surfactants and water-sol. nonionic surfactants. The **CMP** agent is used to polish a semiconductor chip substrate having a silicon oxide insulating film. The **CMP** agent exhibited an improved rinsing performance.
ST chem mech polishing silicon oxide insulating film semiconductor substrate; diketone acetylacetone complex forming agent; surfactant water sol polymer
IT Ketones, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(1,3-diketones, complexing agent; **CMP** agent contg. Ce oxide grain for polishing semiconductor chip)
IT Complexing agents
Polishing
Polishing materials
Semiconductor materials
(**CMP** agent contg. Ce oxide grain for polishing semiconductor chip)
IT Surfactants

(anionic; **CMP** agent contg. Ce oxide grain for polishing semiconductor chip)

IT Surfactants
(nonionic; **CMP** agent contg. Ce oxide grain for polishing semiconductor chip)

IT 7631-86-9, Silicon oxide, processes
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(**CMP** agent contg. Ce oxide grain for polishing semiconductor chip)

IT 1306-38-3, Cerium oxide, uses 7732-18-5, Water, uses 9003-03-6, Polyacrylic acid ammonium salt
RL: TEM (Technical or engineered material use); USES (Uses)
(**CMP** agent contg. Ce oxide grain for polishing semiconductor chip)

IT **123-54-6**, Acetylacetone, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(complexing agent; **CMP** agent contg. Ce oxide grain for polishing semiconductor chip)

L9 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS
AN 2000:865401 CAPLUS
DN 134:43456
TI Production of polysiloxane-based composition for electric insulating coating film
IN Nishikawa, Michinori; Kakuta, Mayumi; Hakamazuka, Akiko; Ebisawa, Masahiko; Yamada, Kinji
PA JSR Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08G077-18
ICS C08G077-50; C09D183-06; C09D183-14; H01L021-312
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 37

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2000344893	A2	20001212	JP 1999-154630	19990602
PRAI JP 1999-154630		19990602		

OS MARPAT 134:43456
AB Title coating film for semiconductor elements with suitable uniform thickness, good dielec. const., storage stability and **CMP** -resistance is prepd. by hydrolysis of .gtoreq.1 silane compd. selected from (A-1) R1aSi(OR2)4-a (R1: H, F, monovalent org. group; R2: monovalent org. group; a = 0-2) and (A-2) R3b(R4O)3-bSi(R7)dSi(OR5)3-cR6c [R3, R4, R5, and R6: monovalent org. group; b, c = 0-2; R7: O, -(CH2)n-; d = 0-1; n = 1-6] in the presence of solvent (B) R8O(CHCH3CH2O)dR9 (R8, R9: H, C1-4 alkyl, CH3CO-; d = 1-2) and alc. (C) having b.p. at normal pressure <100.degree.. Thus a compn. prepd. by reaction of methyltrimethoxysilane with bis(triethoxysilyl)methane in the presence of propylene glycol monomethyl ether and ethanol was spin-coated on a silicone wafer for testing, showing dielec. const. 2.67, good storage stability, and **CMP** (chem.-mech. polishing)-resistance.
ST polysiloxane compn coating elec insulator
IT Electric insulators
(coatings; prodn. of polysiloxane-based compn. for elec. insulating coating film)
IT Polyoxyalkylenes, uses
RL: MOA (Modifier or additive use); USES (Uses)

(compn. contg.; prodn. and properties of polysiloxane-based compn. for elec. insulating coating film)

IT Polyoxyalkylenes, uses
RL: MOA (Modifier or additive use); USES (Uses)
(compn. contg.; prodn. of polysiloxane-based compn. for elec. insulating coating film)

IT Polysiloxanes, uses
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polycarbosilane-; prodn. of polysiloxane-based compn. for elec. insulating coating film)

IT Dielectric constant
Thickness
(prodn. and properties of polysiloxane-based compn. for elec. insulating coating film)

IT Polymerization
Polymerization catalysts
(prodn. of polysiloxane-based compn. for elec. insulating coating film)

IT Polycarbosilanes
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(siloxane-; prodn. of polysiloxane-based compn. for elec. insulating coating film)

IT Alcohols, uses
RL: NUU (Other use, unclassified); USES (Uses)
(solvent; prodn. and properties of polysiloxane-based compn. for elec. insulating coating film)

IT 110-16-7, Maleic acid, uses 27858-32-8, Diisopropoxytitanium bis(ethylacetylacetate)
RL: CAT (Catalyst use); USES (Uses)
(catalyst; prodn. of polysiloxane-based compn. for elec. insulating coating film)

IT **123-54-6**, Acetylacetone, uses 25322-68-3, Poly(ethylene glycol) 26655-94-7, Poly(isopropyl methacrylate)
RL: MOA (Modifier or additive use); USES (Uses)
(compn. contg.; prodn. of polysiloxane-based compn. for elec. insulating coating film)

IT 304916-06-1P 304916-08-3P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(prodn. of polysiloxane-based compn. for elec. insulating coating film)

IT 64-17-5, Ethanol, uses 67-56-1, Methanol, uses 1320-67-8, Propylene glycol monomethyl ether 30136-13-1, Propylene glycol monopropyl ether
RL: NUU (Other use, unclassified); USES (Uses)
(solvent; prodn. of polysiloxane-based compn. for elec. insulating coating film)

=> d his

(FILE 'HOME' ENTERED AT 15:42:52 ON 02 APR 2003)

FILE 'REGISTRY' ENTERED AT 15:43:12 ON 02 APR 2003
E 2,4-PENTADIONE DIOXIME
L1 0 S E3
E 2,4-PENTADIONE
L2 5 S E3
E 2,4-PENTADIONE DIOXIME/CN
L3 0 S E3

```
                E 2,4-PENTADIONE/CN
L4            1 S E3
                E 2,4-PENTADIONE DIOXIME/CN
L5            0 S E3
                E 2,4 PENTADIONE DIOXIME/CN
L6            0 S E3

     FILE 'CAPLUS' ENTERED AT 15:52:39 ON 02 APR 2003
                S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND  123-54-6/REG#

     FILE 'REGISTRY' ENTERED AT 15:53:31 ON 02 APR 2003
L7            1 S 123-54-6/RN

     FILE 'CAPLUS' ENTERED AT 15:53:31 ON 02 APR 2003
L8        11819 S L7
L9            2 S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND L8

=> file reg
COST IN U.S. DOLLARS                                  SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                      26.12      73.21

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)            SINCE FILE      TOTAL
                                                         ENTRY    SESSION
CA SUBSCRIBER PRICE                                      -1.95      -1.95

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Property values tagged with IC are from the ZIC/VINITI data file
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STRUCTURE FILE UPDATES:    1 APR 2003  HIGHEST RN 501325-53-7
DICTIONARY FILE UPDATES:   1 APR 2003  HIGHEST RN 501325-53-7

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available.  See HELP
PROPERTIES for more information.  See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> s pentadione/cns and dioxime/cns
             9 PENTADIONE/CNS
         15278 DIOXIME/CNS
L10          0 PENTADIONE/CNS AND DIOXIME/CNS

=> d his

     (FILE 'HOME' ENTERED AT 15:42:52 ON 02 APR 2003)

     FILE 'REGISTRY' ENTERED AT 15:43:12 ON 02 APR 2003
                E 2,4-PENTADIONE DIOXIME
L1            0 S E3
                E 2,4-PENTADIONE
```

```
L2            5 S E3
                E 2,4-PENTADIONE DIOXIME/CN
L3            0 S E3
                E 2,4-PENTADIONE/CN
L4            1 S E3
                E 2,4-PENTADIONE DIOXIME/CN
L5            0 S E3
                E 2,4 PENTADIONE DIOXIME/CN
L6            0 S E3

     FILE 'CAPLUS' ENTERED AT 15:52:39 ON 02 APR 2003
                S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND  123-54-6/REG#

     FILE 'REGISTRY' ENTERED AT 15:53:31 ON 02 APR 2003
L7            1 S 123-54-6/RN

     FILE 'CAPLUS' ENTERED AT 15:53:31 ON 02 APR 2003
L8        11819 S L7
L9            2 S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND L8

     FILE 'REGISTRY' ENTERED AT 16:05:22 ON 02 APR 2003
L10           0 S PENTADIONE/CNS AND DIOXIME/CNS

=> s ?dion?/cns and ?oxime?/cns
        726592 ?DION?/CNS
        125993 ?OXIME?/CNS
L11      22804 ?DION?/CNS AND ?OXIME?/CNS

=> file caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                      ENTRY    SESSION
FULL ESTIMATED COST                                    17.28      90.49

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                      ENTRY    SESSION
CA SUBSCRIBER PRICE                                     0.00      -1.95
```

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FILE 'CAPLUS' ENTERED AT 16:06:14 ON 02 APR 2003
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FILE COVERS 1907 - 2 Apr 2003  VOL 138 ISS 14
FILE LAST UPDATED: 1 Apr 2003  (20030401/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.


=> d his
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     (FILE 'HOME' ENTERED AT 15:42:52 ON 02 APR 2003)

     FILE 'REGISTRY' ENTERED AT 15:43:12 ON 02 APR 2003
                E 2,4-PENTADIONE DIOXIME
L1            0 S E3
                E 2,4-PENTADIONE
L2            5 S E3
                E 2,4-PENTADIONE DIOXIME/CN
L3            0 S E3
                E 2,4-PENTADIONE/CN
L4            1 S E3
                E 2,4-PENTADIONE DIOXIME/CN
L5            0 S E3
                E 2,4 PENTADIONE DIOXIME/CN
L6            0 S E3

     FILE 'CAPLUS' ENTERED AT 15:52:39 ON 02 APR 2003
                S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND  123-54-6/REG#

     FILE 'REGISTRY' ENTERED AT 15:53:31 ON 02 APR 2003
L7            1 S 123-54-6/RN

     FILE 'CAPLUS' ENTERED AT 15:53:31 ON 02 APR 2003
L8        11819 S L7
L9            2 S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND L8

     FILE 'REGISTRY' ENTERED AT 16:05:22 ON 02 APR 2003
L10           0 S PENTADIONE/CNS AND DIOXIME/CNS
L11       22804 S ?DION?/CNS AND ?OXIME?/CNS

     FILE 'CAPLUS' ENTERED AT 16:06:14 ON 02 APR 2003

=> s cmp or polish? or chemipolish? or chemimech? or planariz? or lap? or grind? or
abrad?
          7829 CMP
         76871 POLISH?
             1 CHEMIPOLISH?
           497 CHEMIMECH?
          5695 PLANARIZ?
         32075 LAP?
         61775 GRIND?
          4615 ABRAD?
L12     179225 CMP OR POLISH? OR CHEMIPOLISH? OR CHEMIMECH? OR PLANARIZ? OR
               LAP? OR GRIND? OR ABRAD?

=> s l11 and l12
         12123 L11
L13         28 L11 AND L12

=> d ti 1-28

L13  ANSWER 1 OF 28  CAPLUS  COPYRIGHT 2003 ACS
TI   Chemical mechanical polishing compositions

L13  ANSWER 2 OF 28  CAPLUS  COPYRIGHT 2003 ACS
TI   Dynamic modeling of the central carbon metabolism of Escherichia coli

L13  ANSWER 3 OF 28  CAPLUS  COPYRIGHT 2003 ACS
TI   Method of polishing silicon wafer without metal contamination

L13  ANSWER 4 OF 28  CAPLUS  COPYRIGHT 2003 ACS
TI   Polishing system and method of its use
```

L13 ANSWER 5 OF 28 CAPLUS COPYRIGHT 2003 ACS
TI Features of a flexible backbone in the coordination compounds of a dioxime ligand: the characterization of supramolecular and dinuclear metal complexes

L13 ANSWER 6 OF 28 CAPLUS COPYRIGHT 2003 ACS
TI Infinite, undulating chains of intermolecularly hydrogen bonded (E,E)-2,2-dimethylcyclohexane-1,3-dione dioximes in the solid state. A single crystal x-ray, charge density distribution and spectroscopic study

L13 ANSWER 7 OF 28 CAPLUS COPYRIGHT 2003 ACS
TI Antipsoriatic nail **polishes** containing glucocorticoids

L13 ANSWER 8 OF 28 CAPLUS COPYRIGHT 2003 ACS
TI Manufacture of self-sintering carbon and carbon materials

L13 ANSWER 9 OF 28 CAPLUS COPYRIGHT 2003 ACS
TI Production of polymer emulsions from olefinically unsaturated monomers

L13 ANSWER 10 OF 28 CAPLUS COPYRIGHT 2003 ACS
TI Ultraviolet-curable conductive resin

L13 ANSWER 11 OF 28 CAPLUS COPYRIGHT 2003 ACS
TI Evaluation of German and **Polish** herbicides in sugar beets

L13 ANSWER 12 OF 28 CAPLUS COPYRIGHT 2003 ACS
TI **Polishable** and robust modified graphite epoxy electrodes

L13 ANSWER 13 OF 28 CAPLUS COPYRIGHT 2003 ACS
TI Optimization of particle-size composition of pigments and fluorescent brighteners by coloristic characteristics

L13 ANSWER 14 OF 28 CAPLUS COPYRIGHT 2003 ACS
TI Bath for vibroabrasive **grinding** and **polishing** of steel

L13 ANSWER 15 OF 28 CAPLUS COPYRIGHT 2003 ACS
TI Nitrogen derivatives from oxo compounds

L13 ANSWER 16 OF 28 CAPLUS COPYRIGHT 2003 ACS
TI Oxygen RIE-resistant deep-UV positive resists: poly(trimethylsilylmethyl methacrylate) and poly(trimethylsilylmethyl methacrylate-co-3-oximo-2-butanone methacrylate)

L13 ANSWER 17 OF 28 CAPLUS COPYRIGHT 2003 ACS
TI Experimental study of the **grinding** of nitrogen pigments in vortical electromagnetic apparatus

L13 ANSWER 18 OF 28 CAPLUS COPYRIGHT 2003 ACS
TI Effect of the modification of nickel surface by internal complexes on the electrochemical activity of the metal

L13 ANSWER 19 OF 28 CAPLUS COPYRIGHT 2003 ACS
TI Intrachromospheruloid/inorganic pigment compositions

L13 ANSWER 20 OF 28 CAPLUS COPYRIGHT 2003 ACS
TI Intrachromospheruloid pigments

L13 ANSWER 21 OF 28 CAPLUS COPYRIGHT 2003 ACS
TI Abrasive member of bonded aggregates in an elastomeric matrix

L13 ANSWER 22 OF 28 CAPLUS COPYRIGHT 2003 ACS

TI Chamber for optical studies at pressures up to 50 kbar and temperatures from 80 to 300.deg.K

L13 ANSWER 23 OF 28 CAPLUS COPYRIGHT 2003 ACS
TI RTV [room tempeeature vulcanizing] adhesive system based on ethylene-propylene-diene terpolymer

L13 ANSWER 24 OF 28 CAPLUS COPYRIGHT 2003 ACS
TI Hot-melt adhesives of polyamides containing oxime compounds or esters

L13 ANSWER 25 OF 28 CAPLUS COPYRIGHT 2003 ACS
TI Hot-melt adhesives of polyolefins containing oxime compounds or their esters

L13 ANSWER 26 OF 28 CAPLUS COPYRIGHT 2003 ACS
TI Encapsulating lipophilic material by coacervation

L13 ANSWER 27 OF 28 CAPLUS COPYRIGHT 2003 ACS
TI Some new carrier separation methods in trace analysis

L13 ANSWER 28 OF 28 CAPLUS COPYRIGHT 2003 ACS
TI 3- and 20-Monoximes of 11.beta.-hydroxy-5.beta.-pregnane-3,20-dione and their corresponding 11-methyl, 11-allyl, and 11-methallyl derivatives

=> d all 1,3-4,14

L13 ANSWER 1 OF 28 CAPLUS COPYRIGHT 2003 ACS
AN 2002:616331 CAPLUS
DN 137:178133
TI Chemical mechanical **polishing** compositions
IN Small, Robert J.; McGhee, Laurence; Maloney, David J.; Peterson, Maria L.
PA USA
SO U.S. Pat. Appl. Publ., 28 pp., Cont.-in-part of U.S. Ser. No. 481,050.
CODEN: USXXCO
DT Patent
LA English
IC ICM H01L021-302
ICS H01L021-461
NCL 438689000
CC 76-3 (Electric Phenomena)
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002111024	A1	20020815	US 2001-985870	20011106
	WO 9804646	A1	19980205	WO 1997-US12220	19970721
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 6117783	A	20000912	US 1998-43505	19980323
	US 6313039	B1	20011106	US 2000-481050	20000111
PRAI	US 1996-23299P	P	19960726		
	WO 1997-US12220	W	19970721		
	US 1998-43505	A1	19980323		
	US 2000-481050	A2	20000111		

AB A compn. for chem. mech. **polishing** that includes a slurry is described. A sufficient amt. of a selectively oxidizing and reducing

compd. is provided to produce a differential removal of a metal and a dielec. material. A pH adjusting compd. adjusts the pH of the compn. to provide a pH that makes the selectively oxidizing and reducing compd. provide the differential removal of a metal and a dielec. material. A compn. may include an effective amt. of an hydroxylamine compd., ammonium persulfate, a compd. which is an indirect source of hydrogen peroxide, and a peracetic acid or periodic acid. A method for chem. mech. **polishing** is described which includes applying a slurry that includes the compn. to a surface to produce mech. removal of the metal and dielec. material.

ST chem mech **polishing** slurry semiconductor device **planarization**

IT Diffusion barrier
Integrated circuits
Oxidation
Reduction
pH
(chem. mech. **polishing** compns. slurry for **planarization** of semiconductor wafers by selective oxidn. and redn. with controlled pH)

IT **Polishing**
(chem.-mech., **planarization**; chem. mech. **polishing** compns. slurry for **planarization** of semiconductor wafers by selective oxidn. and redn. with controlled pH)

IT Semiconductor device fabrication
(**planarization**; chem. mech. **polishing** compns. slurry for **planarization** of semiconductor wafers by selective oxidn. and redn. with controlled pH)

IT 78-10-4P, TEOS 7440-25-7P, Tantalum, uses 7440-33-7P, Tungsten, uses 7440-50-8P, Copper, uses 12033-62-4P, Tantalum nitride TaN
RL: DEV (Device component use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(chem. mech. **polishing** compns. slurry for **planarization** of semiconductor wafers by selective oxidn. and redn. with controlled pH)

IT 57-13-6D, Urea, hydrogen peroxide complex 77-92-9, Citric acid, reactions 79-21-0, Peracetic acid 87-69-4, Tartaric acid, reactions 95-14-7, 1H-Benzotriazole 108-13-4, Malonamide 110-15-6, Succinic acid, reactions 141-82-2, Malonic acid, reactions 144-62-7, Oxalic acid, reactions 288-32-4, Imidazole, reactions 302-01-2, Hydrazine, reactions **2157-56-4**, 2,4-Pentanedione dioxime 7335-69-5, Hydrazine benzoate 7664-93-9, Sulfuric acid, reactions 7722-84-1, Hydrogen peroxide, reactions 7722-84-1D, Hydrogen peroxide, urea complex 7722-86-3, Peroxymonosulfuric acid 7727-54-0, Ammonium persulfate 7758-05-6, Potassium iodate 7790-21-8, Potassium periodate 7803-49-8, Hydroxylamine, reactions 10039-54-0, Hydroxylamine sulfate 10361-76-9, Potassium peroxymonosulfate 13444-71-8, Periodic acid 13465-08-2, Hydroxylamine nitrate 21111-84-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(chem. mech. **polishing** compns. slurry for **planarization** of semiconductor wafers by selective oxidn. and redn. with controlled pH)

L13 ANSWER 3 OF 28 CAPLUS COPYRIGHT 2003 ACS
AN 2001:798748 CAPLUS
DN 135:326050
TI Method of **polishing** silicon wafer without metal contamination
IN Kawasaki, Nobuyuki; Mori, Masanori
PA Sumitomo Metal Industries, Ltd., Japan
SO U.S. Pat. Appl. Publ., 5 pp.
CODEN: USXXCO
DT Patent

not useful

LA English
IC ICM B24B001-00
NCL 451041000
CC 76-2 (Electric Phenomena)
Section cross-reference(s): 66
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2001036799	A1	20011101	US 2001-842016	20010426
	US 6383060	B2	20020507		
PRAI	JP 2000-128529	A	20000427		

AB Mirror-**polishing** of a Si wafer is conducted using an abrasive agent which contains SiO2 as a principal ingredient, and either one of the ingredients set forth at (1) and (2): (1) an ingredient which is selected from alkali sulfide, alkali hydrogen sulfide, and the mixt. thereof; and (2) a chelate agent which contains at least .alpha.-benzoinoxime, diethyldithiocarbamic acid, cupferron, xanthogenic acid, neocupferron, beryllon II, .beta.-quinolinol, 1,1,1-trifluoro-3(2-thenoyl)acetone, dimethylglyoxime, and 1-(2-pyridylazo)-2-naphthol.
ST **polishing** silicon sulfide chelating agent
IT Abrasives
Polishing
(**polishing** silicon wafer without metal contamination)
IT Alkali metal sulfides
Chelates
RL: TEM (Technical or engineered material use); USES (Uses)
(**polishing** silicon wafer without metal contamination)
IT 7440-21-3, Silicon, processes
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(**polishing** silicon wafer without metal contamination)
IT 59-31-4, 2-Quinolinol 85-85-8, 1-(2-Pyridylazo)-2-naphthol **95-45-4**, Dimethylglyoxime 135-20-6, Cupferron 147-84-2, Diethyldithiocarbamic acid, uses 151-01-9, Xanthogenic acid 326-91-0, 1,1,1-Trifluoro-3(2-thenoyl)acetone 441-38-3, .alpha.-Benzoinoxime 1013-20-3, Neocupferron 7631-86-9, Silica, uses 15035-72-0D, Sulfide (HS1-), alkali 51550-25-5, Beryllon II
RL: TEM (Technical or engineered material use); USES (Uses)
(**polishing** silicon wafer without metal contamination)

L13 ANSWER 4 OF 28 CAPLUS COPYRIGHT 2003 ACS
AN 2001:137314 CAPLUS
DN 134:194691
TI **Polishing** system and method of its use
IN Wang, Shumin; Kaufman, Vlasta Brusic; Grumbine, Steven K.; Zhou, Renjie; Cherian, Isaac K.
PA Cabot Microelectronics Corporation, USA
SO PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C09G001-02
CC 42-11 (Coatings, Inks, and Related Products)
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001012740	A1	20010222	WO 2000-US21938	20000810

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA,

ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1226220 A1 20020731 EP 2000-953960 20000810
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL

JP 2003507895 T2 20030225 JP 2001-517628 20000810

PRAI US 1999-148813P P 19990813

WO 2000-US21938 W 20000810

OS MARPAT 134:194691

AB The invention provides a system for **polishing** one or more layers of a multi-layer substrate that includes a first metal layer and a second layer comprising (i) a liq. carrier, (ii) at least one oxidizing agent, (iii) at least one **polishing** additive that increases the rate at which the system **polishes** at least one layer of the substrate, wherein the **polishing** additive is selected from the group consisting of pyrophosphates, condensed phosphates, phosphonic acids and salts thereof, amines, amino alcs., amides, imines, imino acids, nitriles, nitros, thiols, thioesters, thioethers, carbothiolic acids, carbothionic acids, thiocarboxylic acids, thiosalicylic acids, and mixts. thereof, and (iv) a **polishing** pad and/or an abrasive. The invention also provides a method of **polishing** a substrate comprising contacting a surface of a substrate with the system and **polishing** at least a portion of the substrate therewith. Moreover, the invention provides a method for **polishing** one or more layers of a multi-layer substrate that includes a first metal layer and a second layer comprising (a) contacting the first metal layer with the system, and (b) **polishing** the first metal layer with the system until at least a portion of the first metal layer is removed from the substrate.

ST **polish** oxidizing agent additive abrasive

IT Alcohols, uses
RL: MOA (Modifier or additive use); USES (Uses)
(amino; **polishing** system and method of its use)

IT Carboxylic acids, uses
RL: MOA (Modifier or additive use); USES (Uses)
(imino; **polishing** system and method of its use)

IT Abrasives
Oxidizing agents
Polishing materials
(**polishing** system and method of its use)

IT Amides, uses
Amines, uses
Imines
Nitriles, uses
Thioethers
Thiols (organic), uses
RL: MOA (Modifier or additive use); USES (Uses)
(**polishing** system and method of its use)

IT Peroxides, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**polishing** system and method of its use)

IT Esters, uses
RL: MOA (Modifier or additive use); USES (Uses)
(thio; **polishing** system and method of its use)

IT Carboxylic acids, uses
RL: MOA (Modifier or additive use); USES (Uses)
(thiocarboxylic; **polishing** system and method of its use)

IT 112-02-7, Cetyltrimethyl ammonium chloride
RL: MOA (Modifier or additive use); USES (Uses)
(Varisoft 300; **polishing** system and method of its use)

IT 56-18-8, N-(3-Aminopropyl)-1,3-propane diamine 56-87-1, Lysine, uses

68-11-1, Thioglycolic acid, uses 87-69-4, Tartaric acid, uses **95-45-4**, Dimethylglyoxime 96-20-8, 2-Amino-1-butanol 107-10-8, Propylamine, uses 107-15-3, Ethylenediamine, uses 111-41-1 111-51-3, N,N,N',N'-Tetramethyl-1,4-butanediamine 112-57-2, Tetraethylenepentamine 124-09-4, Hexamethylene-diamine, uses 142-73-4, Iminodiacetic acid 506-93-4, Guanidine nitrate 616-29-5, 1,3-Diamino-2-propanol 628-87-5, Iminodiacetonitrile 929-06-6, 2-(2-Aminoethoxy)ethanol 1122-28-7, 1H-Imidazole-4,5-dicarbonitrile 2809-21-4, Dequest 2010 2855-13-2, Isophorone diamine 3312-60-5, N-Cyclohexyl-1,3-propane diamine 4246-51-9, 4,7,10-Trioxa-1,13-tridecanediamine 4408-78-0, Phosphonoacetic acid 5994-61-6, N-Phosphono-methyliminodiacetic acid 6419-19-8, Dequest 2000 7209-38-3, 1,4-Bis(3-aminopropyl) piperazine 7320-34-5, Potassium pyrophosphate 9002-98-6, Lupasol P 15827-60-8, Dequest 2060 16854-32-3, Thiomicamine 19847-12-2, Pyrazine carbonitrile 36465-90-4, Di-phosphonic acid 116770-99-1, Lupasol SC-61B 316356-99-7, Lupasol SKA
RL: MOA (Modifier or additive use); USES (Uses)
(**polishing** system and method of its use)

IT 1306-38-3, Ceria, uses 1310-53-8, Germania, uses 1314-23-4, Zirconia, uses 1344-28-1, Alumina, uses 7631-86-9, Silica, uses 7722-84-1, Hydrogen peroxide, uses 13463-67-7, Titania, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**polishing** system and method of its use)

IT 7440-25-7, Tantalum, processes 7440-50-8, Copper, processes
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(wafers; **polishing** system and method of its use)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Cabot Corp; EP 0896042 A 1999 CAPLUS
(2) Fujimi Inc; EP 0845512 A 1998 CAPLUS

L13 ANSWER 14 OF 28 CAPLUS COPYRIGHT 2003 ACS

AN 1987:21820 CAPLUS

DN 106:21820

TI Bath for vibroabrasive **grinding** and **polishing** of steel

IN Bereshchenko, A. A.; Kovalev, V. I.; Shainskii, M. E.; Ignatenko, O. G.; Bereshchenko, A. S.; Kovalev, O. V.

PA Voroshilovgrad Machine-Building Institute, USSR

SO U.S.S.R.
From: Otkrytiya, Izobret. 1986, (34), 87.
CODEN: URXXAF

DT Patent

LA Russian

IC ICM C23G005-00

CC 55-6 (Ferrous Metals and Alloys)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	SU 1257118	A1	19860915	SU 1985-3877841	19850207
PRAI	SU 1985-3877841		19850207		

AB Etching productivity and surface quality are increased by addn. of HNO3 0.5-1.0, disodium and/or dipotassium oxalate 1.0-2.0, and dimethylglyoxime 0.05-0.07% to the bath contg. H2SO4 0.2-0.3, oxalic acid 2.4-2.8, 30% H2O2 2.1-2.4, chromic acid anhydride 0.1-0.2, Sulfonol (as Na-salt mixt. of alkylbenzenesulfonic acids with C11-18 alkyl paraffinic residues) 0.01-0.03%, and balance water.

ST etching bath vibration **polishing** steel; nitric acid bath **polishing** steel; oxalate bath **polishing** steel; dimethylglyoxime bath **polishing** steel

IT Etching
(of steel, vibroabrasive **polishing** and, aq. bath for)

IT **Polishing**

(vibroabrasive, of steel, aq.)
IT 62-76-0, Disodium oxalate **95-45-4**, Dimethylglyoxime 144-62-7, Oxalic acid, uses and miscellaneous 7664-93-9, Sulfuric acid, uses and miscellaneous 7697-37-2, Nitric acid, uses and miscellaneous 7722-84-1, Hydrogen peroxide, uses and miscellaneous 7738-94-5 12653-83-7, Sulfonol
RL: USES (Uses)
(etching bath contg., for vibroabrasive **polishing** of steel)

=> s 95-45-4
REGISTRY INITIATED
Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures..

L15 1328 L14

=> d histr
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CBIB -------- AN, plus Compressed Bibliographic Data
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FAM --------- AN, PI and PRAI in table, plus Patent Family data
FBIB -------- AN, BIB, plus Patent FAM
IND --------- Indexing data
IPC --------- International Patent Classifications
MAX --------- ALL, plus Patent FAM, RE
PATS -------- PI, SO
SAM --------- CC, SX, TI, ST, IT
SCAN -------- CC, SX, TI, ST, IT (random display, no answer numbers; SCAN must be entered on the same line as the DISPLAY, e.g., D SCAN or DISPLAY SCAN)
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IBIB -------- BIB, indented with text labels
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ISTD -------- STD, indented with text labels

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OIBIB ------- OBIB, indented with text labels

SBIB -------- BIB, no citations
SIBIB ------- IBIB, no citations

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HITIND ------ IC, ICA, ICI, NCL, CC and index field (ST and IT)

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              containing hit terms
HITRN ------- HIT RN and its text modification
HITSTR ------ HIT RN, its text modification, its CA index name, and
              its structure diagram
HITSEQ ------ HIT RN, its text modification, its CA index name, its
              structure diagram, plus NTE and SEQ fields
FHITSTR ----- First HIT RN, its text modification, its CA index name, and
              its structure diagram
FHITSEQ ----- First HIT RN, its text modification, its CA index name, its
              structure diagram, plus NTE and SEQ fields
KWIC -------- Hit term plus 20 words on either side
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     (FILE 'HOME' ENTERED AT 15:42:52 ON 02 APR 2003)

     FILE 'REGISTRY' ENTERED AT 15:43:12 ON 02 APR 2003
                E 2,4-PENTADIONE DIOXIME
L1              0 S E3
                E 2,4-PENTADIONE
L2              5 S E3
                E 2,4-PENTADIONE DIOXIME/CN
L3              0 S E3
                E 2,4-PENTADIONE/CN
L4              1 S E3
                E 2,4-PENTADIONE DIOXIME/CN
L5              0 S E3
                E 2,4 PENTADIONE DIOXIME/CN
L6              0 S E3

     FILE 'CAPLUS' ENTERED AT 15:52:39 ON 02 APR 2003
                S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND  123-54-6/REG#

     FILE 'REGISTRY' ENTERED AT 15:53:31 ON 02 APR 2003
L7              1 S 123-54-6/RN

     FILE 'CAPLUS' ENTERED AT 15:53:31 ON 02 APR 2003
L8          11819 S L7
L9              2 S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND L8

     FILE 'REGISTRY' ENTERED AT 16:05:22 ON 02 APR 2003
L10             0 S PENTADIONE/CNS AND DIOXIME/CNS
L11         22804 S ?DION?/CNS AND ?OXIME?/CNS

     FILE 'CAPLUS' ENTERED AT 16:06:14 ON 02 APR 2003
L12        179225 S CMP OR POLISH? OR CHEMIPOLISH? OR CHEMIMECH? OR PLANARIZ? OR
L13            28 S L11 AND L12
                S 95-45-4/REG#
```

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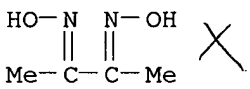
     FILE 'REGISTRY' ENTERED AT 16:09:23 ON 02 APR 2003
L14             1 S 95-45-4/RN

     FILE 'CAPLUS' ENTERED AT 16:09:23 ON 02 APR 2003
L15          1328 S L14

=> d hitstr

L15  ANSWER 1 OF 1328  CAPLUS  COPYRIGHT 2003 ACS
IT   95-45-4, Dimethylglyoxime
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (sulfonyl compd. as radiation sensitive acid generator in radiation
        sensitive chem. amplified resist resin compn.)
RN   95-45-4  CAPLUS
CN   2,3-Butanedione, dioxime (8CI, 9CI)  (CA INDEX NAME)
```



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=> file reg
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     4.26     130.42

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                     0.00      -4.55

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DICTIONARY FILE UPDATES:   1 APR 2003  HIGHEST RN 501325-53-7

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PROPERTIES for more information.  See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> s ?hydrazine?/cns and ?benzoic?/cns
        100223 ?HYDRAZINE?/CNS
        560034 ?BENZOIC?/CNS
L16        680 ?HYDRAZINE?/CNS AND ?BENZOIC?/CNS

=> file caplus
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COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                                 8.84     139.26

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)      SINCE FILE      TOTAL
                                                   ENTRY    SESSION
CA SUBSCRIBER PRICE                                 0.00      -4.55

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FILE LAST UPDATED: 1 Apr 2003  (20030401/ED)

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  substance identification.


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     (FILE 'HOME' ENTERED AT 15:42:52 ON 02 APR 2003)

     FILE 'REGISTRY' ENTERED AT 15:43:12 ON 02 APR 2003
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L1             0 S E3
                 E 2,4-PENTADIONE
L2             5 S E3
                 E 2,4-PENTADIONE DIOXIME/CN
L3             0 S E3
                 E 2,4-PENTADIONE/CN
L4             1 S E3
                 E 2,4-PENTADIONE DIOXIME/CN
L5             0 S E3
                 E 2,4 PENTADIONE DIOXIME/CN
L6             0 S E3

     FILE 'CAPLUS' ENTERED AT 15:52:39 ON 02 APR 2003
                 S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND  123-54-6/REG#

     FILE 'REGISTRY' ENTERED AT 15:53:31 ON 02 APR 2003
L7             1 S 123-54-6/RN

     FILE 'CAPLUS' ENTERED AT 15:53:31 ON 02 APR 2003
L8         11819 S L7
L9             2 S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND L8

     FILE 'REGISTRY' ENTERED AT 16:05:22 ON 02 APR 2003
L10            0 S PENTADIONE/CNS AND DIOXIME/CNS
L11        22804 S ?DION?/CNS AND ?OXIME?/CNS
```

```
     FILE 'CAPLUS' ENTERED AT 16:06:14 ON 02 APR 2003
L12      179225 S CMP OR POLISH? OR CHEMIPOLISH? OR CHEMIMECH? OR PLANARIZ? OR
L13          28 S L11 AND L12
                S 95-45-4/REG#

     FILE 'REGISTRY' ENTERED AT 16:09:23 ON 02 APR 2003
L14           1 S 95-45-4/RN

     FILE 'CAPLUS' ENTERED AT 16:09:23 ON 02 APR 2003
L15        1328 S L14

     FILE 'REGISTRY' ENTERED AT 16:10:07 ON 02 APR 2003
L16         680 S ?HYDRAZINE?/CNS AND ?BENZOIC?/CNS

     FILE 'CAPLUS' ENTERED AT 16:10:31 ON 02 APR 2003

=> s l16 and l12
          5496 L16
L17          4 L16 AND L12

=> d kwic 1-4

L17  ANSWER 1 OF 4  CAPLUS  COPYRIGHT 2003 ACS
TI   Chemical mechanical polishing compositions
AB   A compn. for chem. mech. polishing that includes a slurry is
     described.  A sufficient amt. of a selectively oxidizing and reducing
     compd. is provided to produce.  .  .  which is an indirect source of
     hydrogen peroxide, and a peracetic acid or periodic acid.  A method for
     chem. mech. polishing is described which includes applying a
     slurry that includes the compn. to a surface to produce mech. removal of
     the.  .  .
ST   chem mech polishing slurry semiconductor device
     planarization
IT   Diffusion barrier
     Integrated circuits
     Oxidation
     Reduction
     pH
        (chem. mech. polishing compns. slurry for
        planarization of semiconductor wafers by selective oxidn. and
        redn. with controlled pH)
IT   Polishing
        (chem.-mech., planarization; chem. mech. polishing
        compns. slurry for planarization of semiconductor wafers by
        selective oxidn. and redn. with controlled pH)
IT   Semiconductor device fabrication
        (planarization; chem. mech. polishing compns.
        slurry for planarization of semiconductor wafers by selective
        oxidn. and redn. with controlled pH)
IT   78-10-4P, TEOS   7440-25-7P, Tantalum, uses   7440-33-7P, Tungsten, uses
     7440-50-8P, Copper, uses   12033-62-4P, Tantalum nitride TaN
     RL: DEV (Device component use); PNU (Preparation, unclassified); TEM
     (Technical or engineered material use); PREP (Preparation); USES (Uses)
        (chem. mech. polishing compns. slurry for
        planarization of semiconductor wafers by selective oxidn. and
        redn. with controlled pH)
IT   57-13-6D, Urea, hydrogen peroxide complex   77-92-9, Citric acid,
     reactions   79-21-0, Peracetic acid   87-69-4, Tartaric acid, reactions
     95-14-7, 1H-Benzotriazole   108-13-4, Malonamide   110-15-6, Succinic
     acid, reactions   141-82-2, Malonic acid, reactions   144-62-7, Oxalic
     acid, reactions   288-32-4, Imidazole, reactions   302-01-2, Hydrazine,
```

reactions 2157-56-4, 2,4-Pentanedione dioxime **7335-69-5**, Hydrazine benzoate 7664-93-9, Sulfuric acid, reactions 7722-84-1, Hydrogen peroxide, reactions 7722-84-1D, Hydrogen peroxide, urea complex 7722-86-3, Peroxymonosulfuric acid 7727-54-0, Ammonium persulfate 7758-05-6, Potassium iodate 7790-21-8, Potassium periodate 7803-49-8, Hydroxylamine, reactions 10039-54-0, Hydroxylamine sulfate 10361-76-9, Potassium peroxymonosulfate 13444-71-8, Periodic acid 13465-08-2, Hydroxylamine nitrate 21111-84-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(chem. mech. **polishing** compns. slurry for **planarization** of semiconductor wafers by selective oxidn. and redn. with controlled pH)

L17 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS
AB . . . time. Eleven acyl thiosemicarbazides have been synthesized at room temp. in 84.5-91.0% yields from aryl isothiocyanates and acylhydrazines. For example, **grinding** a mixt. of PhNCS with PhCONHNH2 in an agate mortar for 7 min. gave 89.1% PhNHCSNHNHCOPh.
IT **613-94-5 1673-47-8** 1985-12-2 2131-55-7 3460-49-9 4664-55-5 34800-90-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(solid-state method for prepn. of acyl thiosemicarbazides from aryl isothiocyanates and acylhydrazines)

L17 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2003 ACS
AB . . . filler for polyolefin compns., which is surface-treated with fatty acid but does not evolve products upon heating, is produced by **grinding** a preground material to particle size 1-15 .mu.m in the presence of 0.1-5% C12-22 fatty acids and 0.01-1% antioxidants and. . . heavy metals present in limestone, and prevent formation of bubbles in the processed polyolefin. A typical filler was prepd. by **grinding** limestone 100, stearin 1, and 2,6-di-tert-butyl-p-cresol [128-37-0] 0.2 parts.
IT 128-37-0, uses and miscellaneous 693-36-7 2082-79-3 6345-72-8 6683-19-8 **23647-78-1** 26523-78-4 27676-62-6 31570-04-4 32509-66-3 41484-35-9 90118-48-2
RL: USES (Uses)
(antioxidants, limestone filler treatment with fatty acids in presence of, for bubble-free polyolefin compns.)

L17 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2003 ACS
AB cf. CA 65: 7512d. Malonyl hydrazide reacts with **CMP** and dCMP in aq. solns. with a pH optimum of 4.2, giving addn. products. AMP, GMP, UMP, and corresponding nucleosides. . . and 3,4-dicarboxybenzoylhydrazine enter similar reactions, although the low soly. of the latter makes long reaction times necessary. 3,5-Disulfobenzoylhydrazine couples to **CMP** with a lower rate const. than do the other hydrazides studied. Poly(cytidylic acid) can be converted to a polymer in. . .
ST HYDRAZIDES NUCLEIC ACIDS; NUCLEIC ACIDS HYDRAZIDES; NUCLEOTIDES HYDRAZIDES; **CMP** ACYL HYDRAZIDES; CYTOSINE ACYL HYDRAZIDES
IT 1068-57-1 3815-86-9 17013-02-4 **18490-22-7**
RL: BIOL (Biological study)
(reaction with 5'-cytidylic acid and 5'-deoxycytidylic acid)

=> d bib,ab 1-4

L17 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2003 ACS
AN 2002:616331 CAPLUS
DN 137:178133
TI Chemical mechanical **polishing** compositions

IN Small, Robert J.; McGhee, Laurence; Maloney, David J.; Peterson, Maria L.
PA USA
SO U.S. Pat. Appl. Publ., 28 pp., Cont.-in-part of U.S. Ser. No. 481,050.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2002111024	A1	20020815	US 2001-985870	20011106
WO 9804646	A1	19980205	WO 1997-US12220	19970721
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 6117783	A	20000912	US 1998-43505	19980323
US 6313039	B1	20011106	US 2000-481050	20000111
PRAI US 1996-23299P	P	19960726		
WO 1997-US12220	W	19970721		
US 1998-43505	A1	19980323		
US 2000-481050	A2	20000111		

AB A compn. for chem. mech. **polishing** that includes a slurry is described. A sufficient amt. of a selectively oxidizing and reducing compd. is provided to produce a differential removal of a metal and a dielec. material. A pH adjusting compd. adjusts the pH of the compn. to provide a pH that makes the selectively oxidizing and reducing compd. provide the differential removal of a metal and a dielec. material. A compn. may include an effective amt. of an hydroxylamine compd., ammonium persulfate, a compd. which is an indirect source of hydrogen peroxide, and a peracetic acid or periodic acid. A method for chem. mech. **polishing** is described which includes applying a slurry that includes the compn. to a surface to produce mech. removal of the metal and dielec. material.

L17 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS
AN 2001:556827 CAPLUS
DN 135:318299
TI An efficient solid-state method for the preparation of acyl thiosemicarbazides
AU Li, Jian-Ping; Luo, Qian-Fu; Wang, Yu-Lu; Wang, Hong
CS College of Chemistry and Environmental Science, Henan Normal University, Xinxiang, 453002, Peop. Rep. China
SO Synthetic Communications (2001), 31(12), 1793-1797
CODEN: SYNCAV; ISSN: 0039-7911
PB Marcel Dekker, Inc.
DT Journal
LA English
OS CASREACT 135:318299

AB Solid-state syntheses of acyl thiosemicarbazides are reported for the first time. Eleven acyl thiosemicarbazides have been synthesized at room temp. in 84.5-91.0% yields from aryl isothiocyanates and acylhydrazines. For example, **grinding** a mixt. of PhNCS with PhCONHNH2 in an agate mortar for 7 min. gave 89.1% PhNHCSNHNHCOPh.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2003 ACS
AN 1984:193080 CAPLUS

DN 100:193080
TI Microground limestone filler
IN Pac, Jiri; Petruj, Jaroslav; Vesely, Karel; Kratochvil, Frantisek; Krivanek, Josef; Rovner, Jiri; Smrz, Jiri; Baburek, Jiri; Penicka, Jaroslav
PA Czech.
SO Czech., 7 pp.
CODEN: CZXXA9
DT Patent
LA Czech
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CS 208547	B	19810915	CS 1979-524	19790124
PRAI CS 1979-524		19790124		

AB Nonagglomerating limestone filler for polyolefin compns., which is surface-treated with fatty acid but does not evolve products upon heating, is produced by **grinding** a preground material to particle size 1-15 .mu.m in the presence of 0.1-5% C12-22 fatty acids and 0.01-1% antioxidants and deactivators (substituted phenols, thiodipropionic and phosphite esters, and/or derivs. of ethylenediamine and hydrazine). Antioxidants prevent acid oxidn., which is catalyzed by heavy metals present in limestone, and prevent formation of bubbles in the processed polyolefin. A typical filler was prepd. by **grinding** limestone 100, stearin 1, and 2,6-di-tert-butyl-p-cresol [128-37-0] 0.2 parts.

L17 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2003 ACS
AN 1967:450388 CAPLUS
DN 67:50388
TI Electron microscopic study of base sequence in nucleic acids. VII. Cytosine-specific addition of acyl hydrazides
AU Gal-Or, Leah; Mellema, Jan E.; Moudrianakis, Evangelos N.; Beer, Michael
CS Johns Hopkins Univ., Baltimore, MD, USA
SO Biochemistry (1967), 6(7), 1909-15
CODEN: BICHAW; ISSN: 0006-2960
DT Journal
LA English
AB cf. CA 65: 7512d. Malonyl hydrazide reacts with **CMP** and dCMP in aq. solns. with a pH optimum of 4.2, giving addn. products. AMP, GMP, UMP, and corresponding nucleosides and deoxynucleotides do not react the same way. Acetyl hydrazide and 3,4-dicarboxybenzoylhydrazine enter similar reactions, although the low soly. of the latter makes long reaction times necessary. 3,5-Disulfobenzoylhydrazine couples to **CMP** with a lower rate const. than do the other hydrazides studied. Poly(cytidylic acid) can be converted to a polymer in which 70% of the residues have been converted to the addn. product with malonyl hydrazide. When RNA is so treated, 85% of the cytosine residues can be converted to the addn. product. The other bases are not altered. The significance of these results in the electron microscopic study of nucleotide sequence are discussed.

=> d all 1

L17 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2003 ACS
AN 2002:616331 CAPLUS
DN 137:178133
TI Chemical mechanical **polishing** compositions
IN Small, Robert J.; McGhee, Laurence; Maloney, David J.; Peterson, Maria L.
PA USA
SO U.S. Pat. Appl. Publ., 28 pp., Cont.-in-part of U.S. Ser. No. 481,050.
CODEN: USXXCO

DT Patent
LA English
IC ICM H01L021-302
ICS H01L021-461
NCL 438689000
CC 76-3 (Electric Phenomena)
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002111024	A1	20020815	US 2001-985870	20011106
	WO 9804646	A1	19980205	WO 1997-US12220	19970721
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 6117783	A	20000912	US 1998-43505	19980323
	US 6313039	B1	20011106	US 2000-481050	20000111
PRAI	US 1996-23299P	P	19960726		
	WO 1997-US12220	W	19970721		
	US 1998-43505	A1	19980323		
	US 2000-481050	A2	20000111		

AB A compn. for chem. mech. **polishing** that includes a slurry is described. A sufficient amt. of a selectively oxidizing and reducing compd. is provided to produce a differential removal of a metal and a dielec. material. A pH adjusting compd. adjusts the pH of the compn. to provide a pH that makes the selectively oxidizing and reducing compd. provide the differential removal of a metal and a dielec. material. A compn. may include an effective amt. of an hydroxylamine compd., ammonium persulfate, a compd. which is an indirect source of hydrogen peroxide, and a peracetic acid or periodic acid. A method for chem. mech. **polishing** is described which includes applying a slurry that includes the compn. to a surface to produce mech. removal of the metal and dielec. material.

ST chem mech **polishing** slurry semiconductor device **planarization**

IT Diffusion barrier
Integrated circuits
Oxidation
Reduction
pH
(chem. mech. **polishing** compns. slurry for **planarization** of semiconductor wafers by selective oxidn. and redn. with controlled pH)

IT **Polishing**
(chem.-mech., **planarization**; chem. mech. **polishing** compns. slurry for **planarization** of semiconductor wafers by selective oxidn. and redn. with controlled pH)

IT Semiconductor device fabrication
(**planarization**; chem. mech. **polishing** compns. slurry for **planarization** of semiconductor wafers by selective oxidn. and redn. with controlled pH)

IT 78-10-4P, TEOS 7440-25-7P, Tantalum, uses 7440-33-7P, Tungsten, uses 7440-50-8P, Copper, uses 12033-62-4P, Tantalum nitride TaN
RL: DEV (Device component use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(chem. mech. **polishing** compns. slurry for **planarization** of semiconductor wafers by selective oxidn. and redn. with controlled pH)

IT 57-13-6D, Urea, hydrogen peroxide complex 77-92-9, Citric acid, reactions 79-21-0, Peracetic acid 87-69-4, Tartaric acid, reactions 95-14-7, 1H-Benzotriazole 108-13-4, Malonamide 110-15-6, Succinic acid, reactions 141-82-2, Malonic acid, reactions 144-62-7, Oxalic acid, reactions 288-32-4, Imidazole, reactions 302-01-2, Hydrazine, reactions 2157-56-4, 2,4-Pentanedione dioxime **7335-69-5**, Hydrazine benzoate 7664-93-9, Sulfuric acid, reactions 7722-84-1, Hydrogen peroxide, reactions 7722-84-1D, Hydrogen peroxide, urea complex 7722-86-3, Peroxymonosulfuric acid 7727-54-0, Ammonium persulfate 7758-05-6, Potassium iodate 7790-21-8, Potassium periodate 7803-49-8, Hydroxylamine, reactions 10039-54-0, Hydroxylamine sulfate 10361-76-9, Potassium peroxymonosulfate 13444-71-8, Periodic acid 13465-08-2, Hydroxylamine nitrate 21111-84-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(chem. mech. **polishing** compns. slurry for **planarization** of semiconductor wafers by selective oxidn. and redn. with controlled pH)

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	20.89	160.15

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-5.86	-10.41

FILE 'REGISTRY' ENTERED AT 16:13:08 ON 02 APR 2003
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PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 1 APR 2003 HIGHEST RN 501325-53-7
DICTIONARY FILE UPDATES: 1 APR 2003 HIGHEST RN 501325-53-7

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

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=> s ?pentadione?/cns and ?dioxime?/cns
            13 ?PENTADIONE?/CNS
         15451 ?DIOXIME?/CNS
L18          0 ?PENTADIONE?/CNS AND ?DIOXIME?/CNS

=> s ?pentanedione?/cns and ?dioxime?/cns
         11859 ?PENTANEDIONE?/CNS
         15451 ?DIOXIME?/CNS
L19        486 ?PENTANEDIONE?/CNS AND ?DIOXIME?/CNS

=> file caplus
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COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                    17.68     177.83

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                     0.00     -10.41

FILE 'CAPLUS' ENTERED AT 16:14:06 ON 02 APR 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907 - 2 Apr 2003  VOL 138 ISS 14
FILE LAST UPDATED: 1 Apr 2003  (20030401/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.

=> d his

     (FILE 'HOME' ENTERED AT 15:42:52 ON 02 APR 2003)

     FILE 'REGISTRY' ENTERED AT 15:43:12 ON 02 APR 2003
                E 2,4-PENTADIONE DIOXIME
L1             0 S E3
                E 2,4-PENTADIONE
L2             5 S E3
                E 2,4-PENTADIONE DIOXIME/CN
L3             0 S E3
                E 2,4-PENTADIONE/CN
L4             1 S E3
                E 2,4-PENTADIONE DIOXIME/CN
L5             0 S E3
                E 2,4 PENTADIONE DIOXIME/CN
L6             0 S E3

     FILE 'CAPLUS' ENTERED AT 15:52:39 ON 02 APR 2003
                S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND  123-54-6/REG#

     FILE 'REGISTRY' ENTERED AT 15:53:31 ON 02 APR 2003
L7             1 S 123-54-6/RN

     FILE 'CAPLUS' ENTERED AT 15:53:31 ON 02 APR 2003
L8         11819 S L7
L9             2 S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND L8

     FILE 'REGISTRY' ENTERED AT 16:05:22 ON 02 APR 2003
L10            0 S PENTADIONE/CNS AND DIOXIME/CNS
L11        22804 S ?DION?/CNS AND ?OXIME?/CNS
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     FILE 'CAPLUS' ENTERED AT 16:06:14 ON 02 APR 2003
L12      179225 S GMP OR POLISH? OR CHEMIPOLISH? OR CHEMIMECH? OR PLANARIZ? OR
L13          28 S L11 AND L12
                S 95-45-4/REG#

     FILE 'REGISTRY' ENTERED AT 16:09:23 ON 02 APR 2003
L14           1 S 95-45-4/RN

     FILE 'CAPLUS' ENTERED AT 16:09:23 ON 02 APR 2003
L15        1328 S L14

     FILE 'REGISTRY' ENTERED AT 16:10:07 ON 02 APR 2003
L16         680 S ?HYDRAZINE?/CNS AND ?BENZOIC?/CNS

     FILE 'CAPLUS' ENTERED AT 16:10:31 ON 02 APR 2003
L17           4 S L16 AND L12

     FILE 'REGISTRY' ENTERED AT 16:13:08 ON 02 APR 2003
L18           0 S ?PENTADIONE?/CNS AND ?DIOXIME?/CNS
L19         486 S ?PENTANEDIONE?/CNS AND ?DIOXIME?/CNS

     FILE 'CAPLUS' ENTERED AT 16:14:06 ON 02 APR 2003

=> s l19 and l12
          253 L19
L20         2 L19 AND L12

=> d ti 1-2

L20  ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2003 ACS
TI   Chemical mechanical polishing compositions

L20  ANSWER 2 OF 2  CAPLUS  COPYRIGHT 2003 ACS
TI   Features of a flexible backbone in the coordination compounds of a dioxime
     ligand: the characterization of supramolecular and dinuclear metal
     complexes

=> d all 1

L20  ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2003 ACS
AN   2002:616331  CAPLUS
DN   137:178133
TI   Chemical mechanical polishing compositions
IN   Small, Robert J.; McGhee, Laurence; Maloney, David J.; Peterson, Maria L.
PA   USA
SO   U.S. Pat. Appl. Publ., 28 pp., Cont.-in-part of U.S. Ser. No. 481,050.
     CODEN: USXXCO
DT   Patent
LA   English
IC   ICM  H01L021-302
     ICS  H01L021-461
NCL  438689000
CC   76-3 (Electric Phenomena)
FAN.CNT 2
     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
PI   US 2002111024      A1   20020815       US 2001-985870   20011106
     WO 9804646         A1   19980205       WO 1997-US12220  19970721
          W:  AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
              DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ,
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LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

US 6117783	A	20000912	US 1998-43505	19980323
US 6313039	B1	20011106	US 2000-481050	20000111
PRAI US 1996-23299P	P	19960726		
WO 1997-US12220	W	19970721		
US 1998-43505	A1	19980323		
US 2000-481050	A2	20000111		

AB A compn. for chem. mech. **polishing** that includes a slurry is described. A sufficient amt. of a selectively oxidizing and reducing compd. is provided to produce a differential removal of a metal and a dielec. material. A pH adjusting compd. adjusts the pH of the compn. to provide a pH that makes the selectively oxidizing and reducing compd. provide the differential removal of a metal and a dielec. material. A compn. may include an effective amt. of an hydroxylamine compd., ammonium persulfate, a compd. which is an indirect source of hydrogen peroxide, and a peracetic acid or periodic acid. A method for chem. mech. **polishing** is described which includes applying a slurry that includes the compn. to a surface to produce mech. removal of the metal and dielec. material.

ST chem mech **polishing** slurry semiconductor device **planarization**

IT Diffusion barrier
Integrated circuits
Oxidation
Reduction
pH
(chem. mech. **polishing** compns. slurry for **planarization** of semiconductor wafers by selective oxidn. and redn. with controlled pH)

IT **Polishing**
(chem.-mech., **planarization**; chem. mech. **polishing** compns. slurry for **planarization** of semiconductor wafers by selective oxidn. and redn. with controlled pH)

IT Semiconductor device fabrication
(**planarization**; chem. mech. **polishing** compns. slurry for **planarization** of semiconductor wafers by selective oxidn. and redn. with controlled pH)

IT 78-10-4P, TEOS 7440-25-7P, Tantalum, uses 7440-33-7P, Tungsten, uses 7440-50-8P, Copper, uses 12033-62-4P, Tantalum nitride TaN
RL: DEV (Device component use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(chem. mech. **polishing** compns. slurry for **planarization** of semiconductor wafers by selective oxidn. and redn. with controlled pH)

IT 57-13-6D, Urea, hydrogen peroxide complex 77-92-9, Citric acid, reactions 79-21-0, Peracetic acid 87-69-4, Tartaric acid, reactions 95-14-7, 1H-Benzotriazole 108-13-4, Malonamide 110-15-6, Succinic acid, reactions 141-82-2, Malonic acid, reactions 144-62-7, Oxalic acid, reactions 288-32-4, Imidazole, reactions 302-01-2, Hydrazine, reactions **2157-56-4**, 2,4-Pentanedione dioxime 7335-69-5, Hydrazine benzoate 7664-93-9, Sulfuric acid, reactions 7722-84-1, Hydrogen peroxide, reactions 7722-84-1D, Hydrogen peroxide, urea complex 7722-86-3, Peroxymonosulfuric acid 7727-54-0, Ammonium persulfate 7758-05-6, Potassium iodate 7790-21-8, Potassium periodate 7803-49-8, Hydroxylamine, reactions 10039-54-0, Hydroxylamine sulfate 10361-76-9, Potassium peroxymonosulfate 13444-71-8, Periodic acid 13465-08-2, Hydroxylamine nitrate 21111-84-2

RL: RCT (Reactant); RACT (Reactant or reagent)
(chem. mech. **polishing** compns. slurry for
planarization of semiconductor wafers by selective oxidn. and
redn. with controlled pH)

=> d his

(FILE 'HOME' ENTERED AT 15:42:52 ON 02 APR 2003)

FILE 'REGISTRY' ENTERED AT 15:43:12 ON 02 APR 2003
E 2,4-PENTADIONE DIOXIME
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E 2,4-PENTADIONE
L2 5 S E3
E 2,4-PENTADIONE DIOXIME/CN
L3 0 S E3
E 2,4-PENTADIONE/CN
L4 1 S E3
E 2,4-PENTADIONE DIOXIME/CN
L5 0 S E3
E 2,4 PENTADIONE DIOXIME/CN
L6 0 S E3

FILE 'CAPLUS' ENTERED AT 15:52:39 ON 02 APR 2003
S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND 123-54-6/REG#

FILE 'REGISTRY' ENTERED AT 15:53:31 ON 02 APR 2003
L7 1 S 123-54-6/RN

FILE 'CAPLUS' ENTERED AT 15:53:31 ON 02 APR 2003
L8 11819 S L7
L9 2 S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND L8

FILE 'REGISTRY' ENTERED AT 16:05:22 ON 02 APR 2003
L10 0 S PENTADIONE/CNS AND DIOXIME/CNS
L11 22804 S ?DION?/CNS AND ?OXIME?/CNS

FILE 'CAPLUS' ENTERED AT 16:06:14 ON 02 APR 2003
L12 179225 S CMP OR POLISH? OR CHEMIPOLISH? OR CHEMIMECH? OR PLANARIZ? OR
L13 28 S L11 AND L12
S 95-45-4/REG#

FILE 'REGISTRY' ENTERED AT 16:09:23 ON 02 APR 2003
L14 1 S 95-45-4/RN

FILE 'CAPLUS' ENTERED AT 16:09:23 ON 02 APR 2003
L15 1328 S L14

FILE 'REGISTRY' ENTERED AT 16:10:07 ON 02 APR 2003
L16 680 S ?HYDRAZINE?/CNS AND ?BENZOIC?/CNS

FILE 'CAPLUS' ENTERED AT 16:10:31 ON 02 APR 2003
L17 4 S L16 AND L12

FILE 'REGISTRY' ENTERED AT 16:13:08 ON 02 APR 2003
L18 0 S ?PENTADIONE?/CNS AND ?DIOXIME?/CNS
L19 486 S ?PENTANEDIONE?/CNS AND ?DIOXIME?/CNS

FILE 'CAPLUS' ENTERED AT 16:14:06 ON 02 APR 2003
L20 2 S L19 AND L12

```
=> s l17 and l20
L21             1 L17 AND L20

=> d all

L21  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2003 ACS
AN   2002:616331  CAPLUS
DN   137:178133
TI   Chemical mechanical polishing compositions
IN   Small, Robert J.; McGhee, Laurence; Maloney, David J.; Peterson, Maria L.
PA   USA
SO   U.S. Pat. Appl. Publ., 28 pp., Cont.-in-part of U.S. Ser. No. 481,050.
     CODEN: USXXCO
DT   Patent
LA   English
IC   ICM  H01L021-302
     ICS  H01L021-461
NCL  438689000
CC   76-3 (Electric Phenomena)
FAN.CNT 2
     PATENT NO.         KIND  DATE          APPLICATION NO.  DATE
     ---------------    ----  --------      ---------------  --------
PI   US 2002111024       A1   20020815      US 2001-985870   20011106
     WO 9804646          A1   19980205      WO 1997-US12220  19970721
         W:  AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
             DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ,
             LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL,
             PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US,
             UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR,
             GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA,
             GN, ML, MR, NE, SN, TD, TG
     US 6117783          A    20000912      US 1998-43505    19980323
     US 6313039          B1   20011106      US 2000-481050   20000111
PRAI US 1996-23299P      P    19960726
     WO 1997-US12220     W    19970721
     US 1998-43505       A1   19980323
     US 2000-481050      A2   20000111
AB   A compn. for chem. mech. polishing that includes a slurry is
     described. A sufficient amt. of a selectively oxidizing and reducing
     compd. is provided to produce a differential removal of a metal and a
     dielec. material. A pH adjusting compd. adjusts the pH of the compn. to
     provide a pH that makes the selectively oxidizing and reducing compd.
     provide the differential removal of a metal and a dielec. material. A
     compn. may include an effective amt. of an hydroxylamine compd., ammonium
     persulfate, a compd. which is an indirect source of hydrogen peroxide, and
     a peracetic acid or periodic acid. A method for chem. mech.
     polishing is described which includes applying a slurry that
     includes the compn. to a surface to produce mech. removal of the metal and
     dielec. material.
ST   chem mech polishing slurry semiconductor device
     planarization
IT   Diffusion barrier
     Integrated circuits
     Oxidation
     Reduction
     pH
        (chem. mech. polishing compns. slurry for
        planarization of semiconductor wafers by selective oxidn. and
        redn. with controlled pH)
IT   Polishing
        (chem.-mech., planarization; chem. mech. polishing
```

compns. slurry for **planarization** of semiconductor wafers by selective oxidn. and redn. with controlled pH)

IT Semiconductor device fabrication
(**planarization**; chem. mech. **polishing** compns. slurry for **planarization** of semiconductor wafers by selective oxidn. and redn. with controlled pH)

IT 78-10-4P, TEOS 7440-25-7P, Tantalum, uses 7440-33-7P, Tungsten, uses 7440-50-8P, Copper, uses 12033-62-4P, Tantalum nitride TaN
RL: DEV (Device component use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(chem. mech. **polishing** compns. slurry for **planarization** of semiconductor wafers by selective oxidn. and redn. with controlled pH)

IT 57-13-6D, Urea, hydrogen peroxide complex 77-92-9, Citric acid, reactions 79-21-0, Peracetic acid 87-69-4, Tartaric acid, reactions 95-14-7, 1H-Benzotriazole 108-13-4, Malonamide 110-15-6, Succinic acid, reactions 141-82-2, Malonic acid, reactions 144-62-7, Oxalic acid, reactions 288-32-4, Imidazole, reactions 302-01-2, Hydrazine, reactions **2157-56-4**, 2,4-Pentanedione dioxime **7335-69-5**, Hydrazine benzoate 7664-93-9, Sulfuric acid, reactions 7722-84-1, Hydrogen peroxide, reactions 7722-84-1D, Hydrogen peroxide, urea complex 7722-86-3, Peroxymonosulfuric acid 7727-54-0, Ammonium persulfate 7758-05-6, Potassium iodate 7790-21-8, Potassium periodate 7803-49-8, Hydroxylamine, reactions 10039-54-0, Hydroxylamine sulfate 10361-76-9, Potassium peroxymonosulfate 13444-71-8, Periodic acid 13465-08-2, Hydroxylamine nitrate 21111-84-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(chem. mech. **polishing** compns. slurry for **planarization** of semiconductor wafers by selective oxidn. and redn. with controlled pH)

=> file uspatfull

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	8.97	186.80

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-1.30	-11.71

FILE 'USPATFULL' ENTERED AT 16:18:01 ON 02 APR 2003

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 1 Apr 2003 (20030401/PD)
FILE LAST UPDATED: 1 Apr 2003 (20030401/ED)
HIGHEST GRANTED PATENT NUMBER: US6543053
HIGHEST APPLICATION PUBLICATION NUMBER: US2003061649
CA INDEXING IS CURRENT THROUGH 1 Apr 2003 (20030401/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 1 Apr 2003 (20030401/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2003
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2003

>>> USPAT2 is now available. USPATFULL contains full text of the original, i.e., the earliest published granted patents or applications. USPAT2 contains full text of the latest US publications, starting in 2001, for the inventions covered in USPATFULL. A USPATFULL record contains not only the original published document but also a list of any subsequent publications. The publication number, patent kind code, and publication date for all the US publications for an invention are displayed in the PI (Patent Information) field of USPATFULL <<<

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>>>  records and may be searched in standard search fields, e.g., /PN, <<<
>>>  /PK, etc.                                                        <<<

>>>  USPATFULL and USPAT2 can be accessed and searched together       <<<
>>>  through the new cluster USPATALL.  Type FILE USPATALL to         <<<
>>>  enter this cluster.                                              <<<
>>>                                                                   <<<
>>>  Use USPATALL when searching terms such as patent assignees,      <<<
>>>  classifications, or claims, that may potentially change from     <<<
>>>  the earliest to the latest publication.                          <<<

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> d his

     (FILE 'HOME' ENTERED AT 15:42:52 ON 02 APR 2003)

     FILE 'REGISTRY' ENTERED AT 15:43:12 ON 02 APR 2003
                E 2,4-PENTADIONE DIOXIME
L1              0 S E3
                E 2,4-PENTADIONE
L2              5 S E3
                E 2,4-PENTADIONE DIOXIME/CN
L3              0 S E3
                E 2,4-PENTADIONE/CN
L4              1 S E3
                E 2,4-PENTADIONE DIOXIME/CN
L5              0 S E3
                E 2,4 PENTADIONE DIOXIME/CN
L6              0 S E3

     FILE 'CAPLUS' ENTERED AT 15:52:39 ON 02 APR 2003
                S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND  123-54-6/REG#

     FILE 'REGISTRY' ENTERED AT 15:53:31 ON 02 APR 2003
L7              1 S 123-54-6/RN

     FILE 'CAPLUS' ENTERED AT 15:53:31 ON 02 APR 2003
L8          11819 S L7
L9              2 S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND L8

     FILE 'REGISTRY' ENTERED AT 16:05:22 ON 02 APR 2003
L10             0 S PENTADIONE/CNS AND DIOXIME/CNS
L11         22804 S ?DION?/CNS AND ?OXIME?/CNS

     FILE 'CAPLUS' ENTERED AT 16:06:14 ON 02 APR 2003
L12        179225 S CMP OR POLISH? OR CHEMIPOLISH? OR CHEMIMECH? OR PLANARIZ? OR
L13            28 S L11 AND L12
                S 95-45-4/REG#

     FILE 'REGISTRY' ENTERED AT 16:09:23 ON 02 APR 2003
L14             1 S 95-45-4/RN

     FILE 'CAPLUS' ENTERED AT 16:09:23 ON 02 APR 2003
L15          1328 S L14

     FILE 'REGISTRY' ENTERED AT 16:10:07 ON 02 APR 2003
L16           680 S ?HYDRAZINE?/CNS AND ?BENZOIC?/CNS

     FILE 'CAPLUS' ENTERED AT 16:10:31 ON 02 APR 2003
L17             4 S L16 AND L12
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     FILE 'REGISTRY' ENTERED AT 16:13:08 ON 02 APR 2003
L18           0 S ?PENTADIONE?/CNS AND ?DIOXIME?/CNS
L19         486 S ?PENTANEDIONE?/CNS AND ?DIOXIME?/CNS

     FILE 'CAPLUS' ENTERED AT 16:14:06 ON 02 APR 2003
L20           2 S L19 AND L12
L21           1 S L17 AND L20

     FILE 'USPATFULL' ENTERED AT 16:18:01 ON 02 APR 2003

=> s l12 and l16
         19653 CMP
        109856 POLISH?
             2 CHEMIPOLISH?
           290 CHEMIMECH?
         24261 PLANARIZ?
        119537 LAP?
        113796 GRIND?
         28416 ABRAD?
           777 L16
L22         92 L12 AND L16

=> d his

     (FILE 'HOME' ENTERED AT 15:42:52 ON 02 APR 2003)

     FILE 'REGISTRY' ENTERED AT 15:43:12 ON 02 APR 2003
                 E 2,4-PENTADIONE DIOXIME
L1            0 S E3
                 E 2,4-PENTADIONE
L2            5 S E3
                 E 2,4-PENTADIONE DIOXIME/CN
L3            0 S E3
                 E 2,4-PENTADIONE/CN
L4            1 S E3
                 E 2,4-PENTADIONE DIOXIME/CN
L5            0 S E3
                 E 2,4 PENTADIONE DIOXIME/CN
L6            0 S E3

     FILE 'CAPLUS' ENTERED AT 15:52:39 ON 02 APR 2003
                 S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND 123-54-6/REG#

     FILE 'REGISTRY' ENTERED AT 15:53:31 ON 02 APR 2003
L7            1 S 123-54-6/RN

     FILE 'CAPLUS' ENTERED AT 15:53:31 ON 02 APR 2003
L8        11819 S L7
L9            2 S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND L8

     FILE 'REGISTRY' ENTERED AT 16:05:22 ON 02 APR 2003
L10           0 S PENTADIONE/CNS AND DIOXIME/CNS
L11       22804 S ?DION?/CNS AND ?OXIME?/CNS

     FILE 'CAPLUS' ENTERED AT 16:06:14 ON 02 APR 2003
L12      179225 S CMP OR POLISH? OR CHEMIPOLISH? OR CHEMIMECH? OR PLANARIZ? OR
L13          28 S L11 AND L12
                 S 95-45-4/REG#

     FILE 'REGISTRY' ENTERED AT 16:09:23 ON 02 APR 2003
L14           1 S 95-45-4/RN
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     FILE 'CAPLUS' ENTERED AT 16:09:23 ON 02 APR 2003
L15          1328 S L14

     FILE 'REGISTRY' ENTERED AT 16:10:07 ON 02 APR 2003
L16           680 S ?HYDRAZINE?/CNS AND ?BENZOIC?/CNS

     FILE 'CAPLUS' ENTERED AT 16:10:31 ON 02 APR 2003
L17             4 S L16 AND L12

     FILE 'REGISTRY' ENTERED AT 16:13:08 ON 02 APR 2003
L18             0 S ?PENTADIONE?/CNS AND ?DIOXIME?/CNS
L19           486 S ?PENTANEDIONE?/CNS AND ?DIOXIME?/CNS

     FILE 'CAPLUS' ENTERED AT 16:14:06 ON 02 APR 2003
L20             2 S L19 AND L12
L21             1 S L17 AND L20

     FILE 'USPATFULL' ENTERED AT 16:18:01 ON 02 APR 2003
L22            92 S L12 AND L16

=> s l12 and l19
         19653 CMP
        109856 POLISH?
             2 CHEMIPOLISH?
           290 CHEMIMECH?
         24261 PLANARIZ?
        119537 LAP?
        113796 GRIND?
         28416 ABRAD?
            20 L19
L23          2 L12 AND L19

=> d ti 1-2

L23  ANSWER 1 OF 2  USPATFULL
TI   Chemical-mechanical polishing compositions

L23  ANSWER 2 OF 2  USPATFULL
TI   Methods using oximes for processing a silver halide photographic
     light-sensitive material


=> d his

     (FILE 'HOME' ENTERED AT 15:42:52 ON 02 APR 2003)

     FILE 'REGISTRY' ENTERED AT 15:43:12 ON 02 APR 2003
                E 2,4-PENTADIONE DIOXIME
L1              0 S E3
                E 2,4-PENTADIONE
L2              5 S E3
                E 2,4-PENTADIONE DIOXIME/CN
L3              0 S E3
                E 2,4-PENTADIONE/CN
L4              1 S E3
                E 2,4-PENTADIONE DIOXIME/CN
L5              0 S E3
                E 2,4 PENTADIONE DIOXIME/CN
L6              0 S E3

     FILE 'CAPLUS' ENTERED AT 15:52:39 ON 02 APR 2003
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                S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND  123-54-6/REG#

     FILE 'REGISTRY' ENTERED AT 15:53:31 ON 02 APR 2003
L7           1 S 123-54-6/RN

     FILE 'CAPLUS' ENTERED AT 15:53:31 ON 02 APR 2003
L8       11819 S L7
L9           2 S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND L8

     FILE 'REGISTRY' ENTERED AT 16:05:22 ON 02 APR 2003
L10          0 S PENTADIONE/CNS AND DIOXIME/CNS
L11      22804 S ?DION?/CNS AND ?OXIME?/CNS

     FILE 'CAPLUS' ENTERED AT 16:06:14 ON 02 APR 2003
L12     179225 S CMP OR POLISH? OR CHEMIPOLISH? OR CHEMIMECH? OR PLANARIZ? OR
L13         28 S L11 AND L12
               S 95-45-4/REG#

     FILE 'REGISTRY' ENTERED AT 16:09:23 ON 02 APR 2003
L14          1 S 95-45-4/RN

     FILE 'CAPLUS' ENTERED AT 16:09:23 ON 02 APR 2003
L15       1328 S L14

     FILE 'REGISTRY' ENTERED AT 16:10:07 ON 02 APR 2003
L16        680 S ?HYDRAZINE?/CNS AND ?BENZOIC?/CNS

     FILE 'CAPLUS' ENTERED AT 16:10:31 ON 02 APR 2003
L17          4 S L16 AND L12

     FILE 'REGISTRY' ENTERED AT 16:13:08 ON 02 APR 2003
L18          0 S ?PENTADIONE?/CNS AND ?DIOXIME?/CNS
L19        486 S ?PENTANEDIONE?/CNS AND ?DIOXIME?/CNS

     FILE 'CAPLUS' ENTERED AT 16:14:06 ON 02 APR 2003
L20          2 S L19 AND L12
L21          1 S L17 AND L20

     FILE 'USPATFULL' ENTERED AT 16:18:01 ON 02 APR 2003
L22         92 S L12 AND L16
L23          2 S L12 AND L19

=> s l22 and l23
L24          1 L22 AND L23

=> s l22 not l24
L25         91 L22 NOT L24

=> s l25 and (cmp or polish? or chemipolish? or chemimech? or planariz? or lap? or
grind? or abrad?)/ti
          413 CMP/TI
         4526 POLISH?/TI
            0 CHEMIPOLISH?/TI
            8 CHEMIMECH?/TI
         1274 PLANARIZ?/TI
         1711 LAP?/TI
         4483 GRIND?/TI
          464 ABRAD?/TI
L26          0 L25 AND (CMP OR POLISH? OR CHEMIPOLISH? OR CHEMIMECH? OR PLANARI
               Z? OR LAP? OR GRIND? OR ABRAD?)/TI

=> set high off
```

```
SET COMMAND COMPLETED

=> s l25 and (semiconduct? or wafer? or chip#)
        313799 SEMICONDUCT?
        119913 WAFER?
        254148 CHIP#
L27         15 L25 AND (SEMICONDUCT? OR WAFER? OR CHIP#)

=> set high on
SET COMMAND COMPLETED

=> d his

     (FILE 'HOME' ENTERED AT 15:42:52 ON 02 APR 2003)

     FILE 'REGISTRY' ENTERED AT 15:43:12 ON 02 APR 2003
                E 2,4-PENTADIONE DIOXIME
L1            0 S E3
                E 2,4-PENTADIONE
L2            5 S E3
                E 2,4-PENTADIONE DIOXIME/CN
L3            0 S E3
                E 2,4-PENTADIONE/CN
L4            1 S E3
                E 2,4-PENTADIONE DIOXIME/CN
L5            0 S E3
                E 2,4 PENTADIONE DIOXIME/CN
L6            0 S E3

     FILE 'CAPLUS' ENTERED AT 15:52:39 ON 02 APR 2003
                S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND  123-54-6/REG#

     FILE 'REGISTRY' ENTERED AT 15:53:31 ON 02 APR 2003
L7            1 S 123-54-6/RN

     FILE 'CAPLUS' ENTERED AT 15:53:31 ON 02 APR 2003
L8        11819 S L7
L9            2 S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND L8

     FILE 'REGISTRY' ENTERED AT 16:05:22 ON 02 APR 2003
L10           0 S PENTADIONE/CNS AND DIOXIME/CNS
L11       22804 S ?DION?/CNS AND ?OXIME?/CNS

     FILE 'CAPLUS' ENTERED AT 16:06:14 ON 02 APR 2003
L12      179225 S CMP OR POLISH? OR CHEMIPOLISH? OR CHEMIMECH? OR PLANARIZ? OR
L13          28 S L11 AND L12
                S 95-45-4/REG#

     FILE 'REGISTRY' ENTERED AT 16:09:23 ON 02 APR 2003
L14           1 S 95-45-4/RN

     FILE 'CAPLUS' ENTERED AT 16:09:23 ON 02 APR 2003
L15        1328 S L14

     FILE 'REGISTRY' ENTERED AT 16:10:07 ON 02 APR 2003
L16         680 S ?HYDRAZINE?/CNS AND ?BENZOIC?/CNS

     FILE 'CAPLUS' ENTERED AT 16:10:31 ON 02 APR 2003
L17           4 S L16 AND L12

     FILE 'REGISTRY' ENTERED AT 16:13:08 ON 02 APR 2003
L18           0 S ?PENTADIONE?/CNS AND ?DIOXIME?/CNS
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L19         486 S ?PENTANEDIONE?/CNS AND ?DIOXIME?/CNS

     FILE 'CAPLUS' ENTERED AT 16:14:06 ON 02 APR 2003
L20           2 S L19 AND L12
L21           1 S L17 AND L20

     FILE 'USPATFULL' ENTERED AT 16:18:01 ON 02 APR 2003
L22          92 S L12 AND L16
L23           2 S L12 AND L19
L24           1 S L22 AND L23
L25          91 S L22 NOT L24
L26           0 S L25 AND (CMP OR POLISH? OR CHEMIPOLISH? OR CHEMIMECH? OR PLAN
                SET HIGH OFF
L27          15 S L25 AND (SEMICONDUCT? OR WAFER? OR CHIP#)
                SET HIGH ON

=> s l25 and l27
L28          15 L25 AND L27

=> d kwic

L28  ANSWER 1 OF 15  USPATFULL
SUMM   . . . a large amount of an organic acid in the layer produces a
       problem that the layer is softened and easily abraded. Such a
       problem becomes more marked and acute when the layer is further thinned.
IT  28004-70-8
       (silver saving agent; silver salt photothermog. material contg.)


=> d ti 1-15

L28  ANSWER 1 OF 15  USPATFULL
TI     Silver salt photothermographic material

L28  ANSWER 2 OF 15  USPATFULL
TI     Silver salt photothermographic dry imaging material

L28  ANSWER 3 OF 15  USPATFULL
TI     Anthelmintic pyridinyl acylhydrazones

L28  ANSWER 4 OF 15  USPATFULL
TI     Anthelmintic pyridinyl acylhydrazones derivatives

L28  ANSWER 5 OF 15  USPATFULL
TI     Anthelmintic quinolinyl acylhydrazones, method of use and compositions

L28  ANSWER 6 OF 15  USPATFULL
TI     Printed circuit boards of laminated thermosetting sheets

L28  ANSWER 7 OF 15  USPATFULL
TI     Naphtholactam dyestuffs

L28  ANSWER 8 OF 15  USPATFULL
TI     Naphtholactam dyestuffs

L28  ANSWER 9 OF 15  USPATFULL
TI     Oxadiazol-5-yl-coumarin derivatives

L28  ANSWER 10 OF 15  USPATFULL
TI     Method of use, composition, and compounds

L28  ANSWER 11 OF 15  USPATFULL
```

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TI     Penicillins

L28  ANSWER 12 OF 15  USPATFULL
TI     Penicillins

L28  ANSWER 13 OF 15  USPATFULL
TI     Penicillins

L28  ANSWER 14 OF 15  USPATFULL
TI     Anthelmintic methods employing benzoyl chloride phenylhydrazones

L28  ANSWER 15 OF 15  USPATFULL
TI     Penicillins

=> d his

     (FILE 'HOME' ENTERED AT 15:42:52 ON 02 APR 2003)

     FILE 'REGISTRY' ENTERED AT 15:43:12 ON 02 APR 2003
                E 2,4-PENTADIONE DIOXIME
L1              0 S E3
                E 2,4-PENTADIONE
L2              5 S E3
                E 2,4-PENTADIONE DIOXIME/CN
L3              0 S E3
                E 2,4-PENTADIONE/CN
L4              1 S E3
                E 2,4-PENTADIONE DIOXIME/CN
L5              0 S E3
                E 2,4 PENTADIONE DIOXIME/CN
L6              0 S E3

     FILE 'CAPLUS' ENTERED AT 15:52:39 ON 02 APR 2003
                S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND  123-54-6/REG#

     FILE 'REGISTRY' ENTERED AT 15:53:31 ON 02 APR 2003
L7              1 S 123-54-6/RN

     FILE 'CAPLUS' ENTERED AT 15:53:31 ON 02 APR 2003
L8          11819 S L7
L9              2 S (CMP OR "CHEMICAL MECHANICAL POLISHING") AND L8

     FILE 'REGISTRY' ENTERED AT 16:05:22 ON 02 APR 2003
L10             0 S PENTADIONE/CNS AND DIOXIME/CNS
L11         22804 S ?DION?/CNS AND ?OXIME?/CNS

     FILE 'CAPLUS' ENTERED AT 16:06:14 ON 02 APR 2003
L12        179225 S CMP OR POLISH? OR CHEMIPOLISH? OR CHEMIMECH? OR PLANARIZ? OR
L13            28 S L11 AND L12
                S 95-45-4/REG#

     FILE 'REGISTRY' ENTERED AT 16:09:23 ON 02 APR 2003
L14             1 S 95-45-4/RN

     FILE 'CAPLUS' ENTERED AT 16:09:23 ON 02 APR 2003
L15          1328 S L14

     FILE 'REGISTRY' ENTERED AT 16:10:07 ON 02 APR 2003
L16           680 S ?HYDRAZINE?/CNS AND ?BENZOIC?/CNS

     FILE 'CAPLUS' ENTERED AT 16:10:31 ON 02 APR 2003
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L17           4 S L16 AND L12

     FILE 'REGISTRY' ENTERED AT 16:13:08 ON 02 APR 2003
L18           0 S ?PENTADIONE?/CNS AND ?DIOXIME?/CNS
L19         486 S ?PENTANEDIONE?/CNS AND ?DIOXIME?/CNS

     FILE 'CAPLUS' ENTERED AT 16:14:06 ON 02 APR 2003
L20           2 S L19 AND L12
L21           1 S L17 AND L20

     FILE 'USPATFULL' ENTERED AT 16:18:01 ON 02 APR 2003
L22          92 S L12 AND L16
L23           2 S L12 AND L19
L24           1 S L22 AND L23
L25          91 S L22 NOT L24
L26           0 S L25 AND (CMP OR POLISH? OR CHEMIPOLISH? OR CHEMIMECH? OR PLAN
                SET HIGH OFF
L27          15 S L25 AND (SEMICONDUCT? OR WAFER? OR CHIP#)
                SET HIGH ON
L28          15 S L25 AND L27

=> s l25 not l28
L29          76 L25 NOT L28

=> d ti 1-76

L29  ANSWER 1 OF 76  USPATFULL
TI     Indazole compounds and pharmaceutical compositions for inhibiting
       protein kinases, and methods for their use

L29  ANSWER 2 OF 76  USPATFULL
TI     Indazole compounds and pharmaceutical compositions for inhibiting
       protein kinases, and methods for their use

L29  ANSWER 3 OF 76  USPATFULL
TI     4-substituted-1- (arylmethylidene) thiosemicarbazide, 4-substituted-1-
       (arylcarbonyl) thiosemicarbazide and analogs as activators of caspases
       and inducers of apoptosis and the use thereof

L29  ANSWER 4 OF 76  USPATFULL
TI     Substituted 3-aryl-5-aryl-[1,2,4]-oxadiazoles and analogs as activators
       of caspases and inducers of apoptosis and the use thereof

L29  ANSWER 5 OF 76  USPATFULL
TI     Pesticidal triazine-derivatives

L29  ANSWER 6 OF 76  USPATFULL
TI     Substituted N'-(arylcarbonyl)-benzhydrazides, N'-(arylcarbonyl)-
       benzylidene-hydrazides and analogs as activators of caspases and
       inducers of apoptosis and the use thereof

L29  ANSWER 7 OF 76  USPATFULL
TI     Insecticides

L29  ANSWER 8 OF 76  USPATFULL
TI     Silver halide color photographic photosensitive material and method for
       forming image

L29  ANSWER 9 OF 76  USPATFULL
TI     Salicylic acid derivatives, processes for their preparation,
       compositions comprising them, their use
```

L29 ANSWER 10 OF 76 USPATFULL
TI Cinchonan based chiral selectors for separation of stereoisomers

L29 ANSWER 11 OF 76 USPATFULL
TI Insecticidal compositions

L29 ANSWER 12 OF 76 USPATFULL
TI Carboxamides useful as 5-HT1F agonists

L29 ANSWER 13 OF 76 USPATFULL
TI Insecticides

L29 ANSWER 14 OF 76 USPATFULL
TI Insecticidal compositions and methods of use employing them

L29 ANSWER 15 OF 76 USPATFULL
TI Cysteine protease inhibitors

L29 ANSWER 16 OF 76 USPATFULL
TI Insecticidal compositions and methods of use employing imidacloprid and another insecticide

L29 ANSWER 17 OF 76 USPATFULL
TI Methods for controlling invertebrate pests using cocaine receptor binding ligands

L29 ANSWER 18 OF 76 USPATFULL
TI Dihydropyridazinones, pyridazinones and related compounds as fungicides

L29 ANSWER 19 OF 76 USPATFULL
TI Portable motor or engine-driven cutting-off machine

L29 ANSWER 20 OF 76 USPATFULL
TI 1,3,4-oxadiazoles

L29 ANSWER 21 OF 76 USPATFULL
TI Smectic C liquid crystal composition and a liquid crystal display element

L29 ANSWER 22 OF 76 USPATFULL
TI Method and apparatus for avoiding desensitization of a radio frequency receiver

L29 ANSWER 23 OF 76 USPATFULL
TI Insecticidal hydrazine derivatives

L29 ANSWER 24 OF 76 USPATFULL
TI Acaricidally active tetrazine derivatives

L29 ANSWER 25 OF 76 USPATFULL
TI Smectic C liquid crystal composition and a liquid crystal display element

L29 ANSWER 26 OF 76 USPATFULL
TI Process for preparing a coating with improved resistance to yellowing and the resulting coating

L29 ANSWER 27 OF 76 USPATFULL
TI One-component coating compositions containing oxime- or lactam-blocked polyisocyanates which have improved resistance to yellowing

L29 ANSWER 28 OF 76 USPATFULL

TI Preparation of N-aminopyridones

L29 ANSWER 29 OF 76 USPATFULL
TI Acaricidally active tetrazine derivatives

L29 ANSWER 30 OF 76 USPATFULL
TI Highly insoluble azole embossing inhibitor and the use thereof

L29 ANSWER 31 OF 76 USPATFULL
TI Milbemycin derivatives, their preparation and their use

L29 ANSWER 32 OF 76 USPATFULL
TI Hydraulic machine with wedge-shaped swashplate

L29 ANSWER 33 OF 76 USPATFULL
TI Halopropargyl compounds, compositions, uses and processes of preparation

L29 ANSWER 34 OF 76 USPATFULL
TI Polymeric pigment dispersants for use in coating compositions

L29 ANSWER 35 OF 76 USPATFULL
TI 1-aryl-3-(3.4-dihydro-4-oxo-3-quinazolinyl)urea fungicidal agents

L29 ANSWER 36 OF 76 USPATFULL
TI Aryl triazole herbicides

L29 ANSWER 37 OF 76 USPATFULL
TI Halopropargyl compounds, compositions, uses and processes of preparation

L29 ANSWER 38 OF 76 USPATFULL
TI Blends of polybenzimidazoles and aromatic polyamides, aromatic polyamide-hydrazides or aromatic polyamides containing heterocyclic linkages

L29 ANSWER 39 OF 76 USPATFULL
TI 1-aryl-3-(3,4-dihydro-4-oxo-3-quinazolinyl)urea fungicidal agents

L29 ANSWER 40 OF 76 USPATFULL
TI Insecticidal substituted and unsubstituted benzoic acid 1-alkyl, 2-alkyl and 2-cycloalkylhydrazides

L29 ANSWER 41 OF 76 USPATFULL
TI Triazole angiotensin II antagonists incorporating a substituted benzyl element

L29 ANSWER 42 OF 76 USPATFULL
TI Aryl triazole herbicides

L29 ANSWER 43 OF 76 USPATFULL
TI Use of hydrazide stabilizers for 3-isothiazolones

L29 ANSWER 44 OF 76 USPATFULL
TI Process for preparing multipurpose polymer bound stabilizers and polymer bound stabilizer produced thereby

L29 ANSWER 45 OF 76 USPATFULL
TI Insecticidal ferrocenoyl acylhydrazines

L29 ANSWER 46 OF 76 USPATFULL
TI Multipurpose polymer bound stabilizers

L29 ANSWER 47 OF 76 USPATFULL

TI Method for forming a direct positive color image

L29 ANSWER 48 OF 76 USPATFULL
TI Avermectin derivatives

L29 ANSWER 49 OF 76 USPATFULL
TI Multipurpose polymer bound stabilizers

L29 ANSWER 50 OF 76 USPATFULL
TI Novel insecticidal dibenzoyl-tert-butylcarbazonitrile compounds and method for the preparation thereof

L29 ANSWER 51 OF 76 USPATFULL
TI Insecticidal substituted and unsubstituted benzoic acid 1-alkyl, 2 alkyl and 2-cycloalkylhydrazides

L29 ANSWER 52 OF 76 USPATFULL
TI 1,2,4-Triazole compounds

L29 ANSWER 53 OF 76 USPATFULL
TI 3,6-dichloro-2-methoxybenzohydroxamic acid derivatives and use as herbicidal agents

L29 ANSWER 54 OF 76 USPATFULL
TI Herbicidal sulfonamides

L29 ANSWER 55 OF 76 USPATFULL
TI Heterocyclic derivatives of (4-aryloxymethyl-1,3-dioxolan-2-yl)methyl-1H-imidazoles and 1H-1,2,4-triazoles

L29 ANSWER 56 OF 76 USPATFULL
TI Naphthostyril Ni or Cu complexes, a process for their preparation, and high molecular weight organic material pigmented with these metal complexes

L29 ANSWER 57 OF 76 USPATFULL
TI N-Methylcarbamoyloxy benzaldehyde imine herbicide extenders

L29 ANSWER 58 OF 76 USPATFULL
TI Heterocyclic derivatives of (4-aryloxymethyl-1,3-dioxolan-2-yl)methyl-1H-imidazoles and 1H-1,2,4-triazoles

L29 ANSWER 59 OF 76 USPATFULL
TI Benzoylhydrazones of aryl phosphates and phosphonates

L29 ANSWER 60 OF 76 USPATFULL
TI Selected 2-acyl- or 2-thioacyl-1-trichloroacetimidoylhydrazines and their use as fungicides

L29 ANSWER 61 OF 76 USPATFULL
TI 1,2,4,5-Tetrazines

L29 ANSWER 62 OF 76 USPATFULL
TI Azo dyes from an oxadiazolyl-substituted aniline

L29 ANSWER 63 OF 76 USPATFULL
TI Heterocyclic derivatives of (4-aryloxy-methyl-1,3-dioxolan-2-yl)methyl-1H-imidazoles and 1H-1,2,4-triazoles

L29 ANSWER 64 OF 76 USPATFULL
TI 2-Cyano-5-substituted 1,3,4-oxadiazoles and fungicidal compositions containing them

L29 ANSWER 65 OF 76 USPATFULL
TI Agricultural and horticultural N-benzoyl-N'-trichloroethylidene hydrazine fungicides

L29 ANSWER 66 OF 76 USPATFULL
TI Magnetic recording medium supported on aromatic polyamide

L29 ANSWER 67 OF 76 USPATFULL
TI Iso-(thio)-urea derivatives

L29 ANSWER 68 OF 76 USPATFULL
TI Aromatic polyamide-type films

L29 ANSWER 69 OF 76 USPATFULL
TI Oxadiazole benzoic acid derivatives as herbicides

L29 ANSWER 70 OF 76 USPATFULL
TI Salicylic acid hydrazide stabilizers for polymers

L29 ANSWER 71 OF 76 USPATFULL
TI Color stabilized polyurethanes

L29 ANSWER 72 OF 76 USPATFULL
TI Method of manufacturing of indolyl acetic acids

L29 ANSWER 73 OF 76 USPATFULL
TI Oxazole and oxadiazole benzoic acid derivatives as herbicides

L29 ANSWER 74 OF 76 USPATFULL
TI CERTAIN BENZOYL CHLORIDE PHENYLHYDRAZONES AS INSECTICIDES AND MITICIDES

L29 ANSWER 75 OF 76 USPATFULL
TI Rapid curing resin compositions comprising a ketone-aldehyde condensation polymer modified with an acyl hydrazide

L29 ANSWER 76 OF 76 USPATFULL
TI RAPID CURING RESIN COMPOSITIONS COMPRISING A PHENOL-ALDEHYDE CONDENSATION POLYMER MODIFIED WITH AN ACYL HYDRAZIDE